

CHAPTER 6: COMMS

6.0 COMMS

The COMMS pull-down menu contains options to manage and process incoming and outgoing transmissions, plus options that facilitate communications with other computer systems.

The Unified Build (UB) portion of JMCIS supports the transmission and reception of formatted messages that comply with current military specifications. UB's *log management* options provide the user with added functionality to:

- Create and manage a maximum of 135 incoming and outgoing message logs, with each log containing up to 1000 messages.
- Review incoming message text, reenter messages into the system, decode messages not previously processed by the system, and retransmit messages through another communications channel.
- Review outgoing message text, retransmit messages, edit, print, or display all outgoing messages in the system, or only those of a specified type.

Message Formats

The primary format used by UB for message transmission is OTH-T GOLD—the part of the message between the MSGID (message identification) and the ENDAT line types.

- The header and footer portion of the message use the JANAP 128 format; however, the UB decoder does not require any incoming message to have a header or footer.
- A message without a header and footer, or with only a partial header, can be successfully received and decoded by a JMCIS system.

UB encodes and transmits the following types of formatted messages:

OTH GOLD contact reports
OTH GOLD overlays
OTH GOLD opnotes
OTH GOLD FOTC SITREPS

UB can decode and automatically correlate information from a variety of sources including BE-3 (WIZ and HDF formats), Link-16, JINTACCS TACREP, JINTACCS TACELINT, NTDS Link-11, NTDS Link-14, CVNS, and RAINFORM B.

About message contents:

- Messages may contain up to 100 lines per message.
- Each message can have as many contacts as necessary; typically, 25-40 contact reports per message. (OTH GOLD contact reports are divided at logical points.)
- Transmission of track histories is operator-controlled.
- Several PIM tracks or overlays may be contained within a message (as with contact report data).
- Overlays are currently transmitted in the OVLY2 format and can be decoded in JOTSOVLY, OVLY1, and OVLY2 formats. A near-term upgrade will also support ADDGRAF overlay formats.
- SATVUL reports—such as Charlie elements, active satellites, and vulnerability reports—can be transmitted.
- The system automatically transmits tracks constructed of several position types (such as LOB, Brg Box, etc.) *if* the SEND HISTORY checkbox is toggled ON in the XMIT FORMAT window.
- Version Translation—workstations that have the “UB 2x to 3x Interface” segment installed can exchange track data via the GENBROADCAST capability. These systems must also be running compatible versions of the JMCIS software; i.e., version 2.2.0.3 and above.

6.0.1 MESSAGE DATABASE

The UB message database is the collection of all messages sent *from* or received *by* the JMCIS system, including messages that are stored to send at a later time.

UB applies its log management function to create and maintain various message logs to:

- view the status of incoming and outgoing messages
- edit, print, retransmit, delete, or reprocess selected messages from the incoming and outgoing message logs

About message logs:

Two system-provided logs, the Incoming Message Log and Outgoing Message Log, are assigned at system installation. Additional logs can be created by the operator, who in turn assigns message types as needed to the logs. The system also provides a Default Log, which is used in the process of reassigning message types.

Incoming Message Log—stores all messages received by the system. Incoming messages are placed at the top of each log when received and the last (oldest) message is deleted when that log reaches capacity.

The system-provided *Opnote Log*, which stores incoming and outgoing opnotes, PIM tracks, and satellite messages, is an example of a specialized incoming message log.

Outgoing Message Log—stores all messages transmitted by the system. Raw data access is also provided.

Default Message Log—acts as a temporary holding area until an operator assigns a message type (or types) to another log.

System-provided and operator created logs are discussed in greater detail in the following sections: *Log Mgr Incoming*, *Log Mgr Outgoing*, *Incoming Msg Log*, and *Outgoing Msg Log*.

6.0.2 SUMMARY OF COMMON OPERATIONS—COMMS

Window buttons and pop-up menu options common to most JMCIS operations are described in this section and will not be discussed in detail in the following sections. The buttons and options listed below are routinely found on Comms option windows. Those that are “exceptions to the rule” will be described within their respective sections.

Note: See Appendix A, *Common Operations*, for a more detailed description of these buttons and options.

ACTIVATE—turns the designated object/function ON. For example, to activate an overlay means to plot it on the tactical display.

ADD—opens a window to add a like record or function.

ARCHIVE—saves individual records from a database (archived) to another location (e.g., tape) for storage.

CANCEL—discards changes made to data and returns to the previous function.

COPY—makes a duplicate copy of an existing record from the appropriate database.

DEACTIVATE—turns the designated object/function OFF.

DELETE—removes (deletes) the selected record(s) from the database.

EDIT—opens a window to view or change the settings of a record.

EXIT—exits (leaves) the option in use.

EXPORT—sends records from one workstation to others on the network.

HELP—provides a general description of the option, function, or window.

OK—accepts any changes made to data and returns to the previous function.

PRINT—generates a printed report of the selected record or file.

RESTORE—retrieves stored records to their original database.

SELECT ALL—selects all the items in a list.

UNSELECT ALL—deselects all the items in a list

XMIT—sends a record from a particular database to another location.

6.0.3 COMMS PULL-DOWN MENU

The following COMMS menu options control UB communications:

LOCAL OPNOTES (ALT + W)

Create free-form operator notes and transmit them to other locations.....6-5

INCOMING OPNOTES

View a log of incoming opnotes and view the text of selected opnotes.6-9

OPERATOR MESSAGES

Communicate with other UB operators on the local area network
(LAN).....6-11

LOG MGR INCOMING

Create and manage multiple incoming message logs, in addition to the
main log created by the system.6-14

LOG MGR OUTGOING

Create and manage multiple outgoing message logs, in addition to the
main log created by the system.6-21

INCOMING MSG LOG (F8)

View a log of all incoming messages and view the text of selected
messages.6-25

OUTGOING MSG LOG (F9)

View a log of all outgoing messages and the text of selected messages.6-38

MSG HEADERS

Create general header information for outgoing messages. This
information includes who is sending and receiving the message, the
security classification of the message, and the message priority.6-48

AUTO-FORWARD TABLE

Create and maintain a table to automatically forward specified message types to other destinations.6-53

DDN HOST TABLE

For ashore sites—create and maintain a list of host names and their relationship to your site.6-62

STU III DIRECTORY

Send classified data over phone lines.6-63

DECODER STATUS

Display messages that are sent to the decoder.6-65

MESSAGE ALERTS

View selected messages from the ILOG.6-66

DDN NET PING

For ashore sites—determine whether or not you are able to communicate with selected host names.....6-73

COMMUNICATIONS

Specify the settings that are needed for communications (configuration settings and settings to turn on and off communications channels).6-76

CHANNEL STATUS

View the status of all active communications channels.6-128

NAV UPDATE RATE

Set a time interval to update and archive the position of Ownship on the tactical display.6-130

6.1 LOCAL OPNOTES

The LOCAL OPNOTES option is used to create free-form operator notes in a word processing-type environment, edit existing opnotes, and transmit opnotes to other locations.

To access this window: COMMS pull-down menu : LOCAL OPNOTES option : OPNOTES window (Figure 6-11).

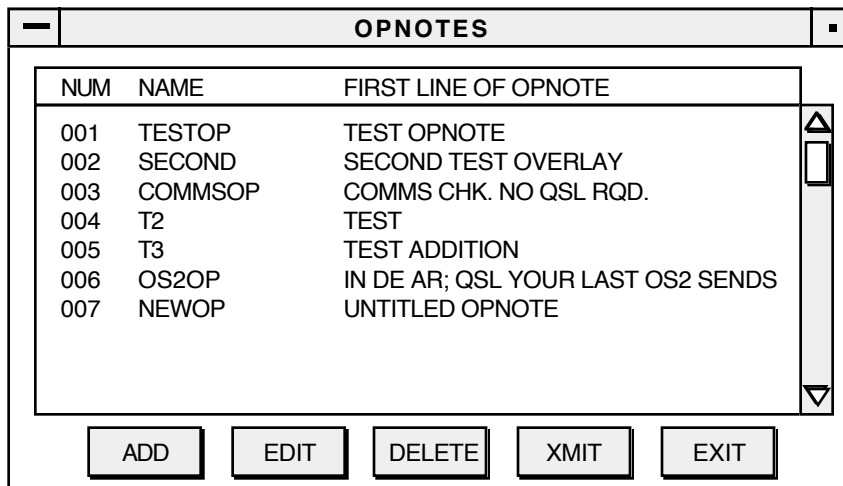


Figure 6.1 -1 Opnotes Window with Pop-up Menu

The OPNOTES window lists all opnotes in the system, with the name and first line of each opnote displayed for faster identification.

OPNOTE Window Buttons

ADD—a new opnote. Described in *Create a New Opnote*.

EDIT—an opnote.

1. Select the opnote from the OPNOTES window.
2. Click EDIT and the OPNOTE EDITOR window appears with the selected opnote.
3. Make changes to the opnote; options to edit are the same as those to add.
4. SAVE the changes, or click EXIT to discard the changes.

DELETE—opnotes from the system.

1. Select one or more opnotes from the OPNOTES window.
2. Click DELETE.
3. The selected opnotes are removed from the list and deleted from the system.

XMIT—transmit an opnote to other locations.

1. Select the opnote from the list in the OPNOTES window.
2. Click XMIT to open the HEADER EDIT window and start the transmission process.

3. See Appendix A, *XMIT* for details about the HEADER EDIT window and the transmission process.

EXIT—the option and close the window without saving any changes.

6.1.1 CREATE A NEW OPNOTE

Click ADD from the OPNOTES window to open the OPNOTE EDITOR window (Figure 6.1-2).

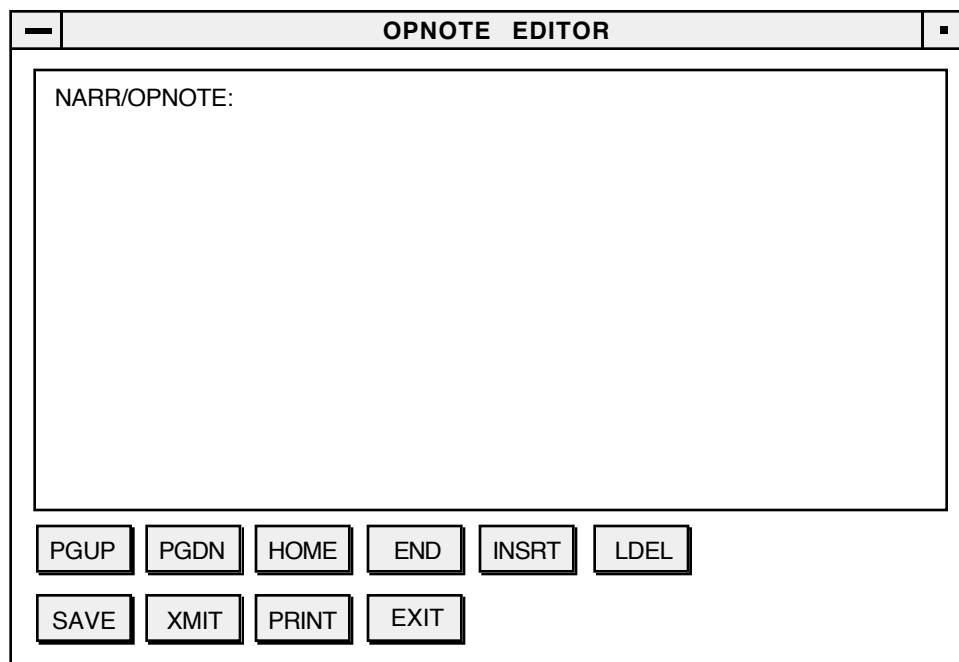


Figure 6.1-2 Opnote Editor Window

How to use the OPNOTE EDITOR Window:

1. Enter the opnote message, up to 100 lines.
 - Text entered into the first line is used to identify the opnote.
 - Opnote lines in the window automatically scroll to allow more text (lines) entry after reaching the bottom of the window.
2. Use the window buttons to view more of the information in this window.

Note: An opnote can contain a maximum of 100 lines; however, when possible, opnotes should be limited to 20 lines or less as some systems (e.g., TWCS) cannot process longer opnotes.

OPNOTE EDITOR Window Buttons

PGUP or PGDN—show the next page of information in an upward or downward direction.

HOME—show the first page of data.

END—show the last page of data.

LDEL—delete the highlighted line.

INSRT—insert a new blank line above the highlighted line.

SAVE—an opnote.

1. Click SAVE to open the OPNOTE SAVE window.
2. Enter a name for the opnote.
3. Click OK to save the opnote , or click CANCEL to discard it.

XMIT—transmit the opnote to another location.

1. Click XMIT to open the HEADER EDIT window and start the transmission process. The same transmission procedure is used by many UB options.
2. See Appendix A, XMIT for details about the HEADER EDIT window and the transmission process.

PRINT—a copy of the opnote.

1. Click PRINT to open the JMCIS PRINTER window and identify where the opnote will be printed.
2. See *PRINT* in Appendix A for details about the JMCIS PRINTER window and the printer selection process.

EXIT—close the OPNOTE EDITOR window.

To send an opnote using the EMAIL TABLE:

1. Set up an EMAIL comms channel. (See the *COMMUNICATIONS* section.)
2. Use the EMAIL TABLE option to set up a table entry.
3. Select LOCAL OPNOTES from the COMMS pull down menu and enter message text.
4. Click XMIT to transmit message.
5. The HEADER EDIT window opens. Make changes as needed.
6. Click OK and the OUTPUT COMMS CHANNEL window appears.

- The EMAIL channel set up in step 1 appears as an entry in this window.
- 7. Select the EMAIL channel and click OK. The message transmits as an EMAIL.

6.1.2 OPNOTES POP-UP MENU

Options on the OPNOTES pop-up menu (ADD, ARCHIVE, COPY, EDIT, EXIT, DELETE, PRINT, RESTORE, SELECT ALL, UNSELECT ALL, XMIT), perform as described in *Summary of Common Operations*.

6.2 INCOMING OPNOTES

Use the INCOMING OPNOTES option to view a log of incoming opnotes and to view the text of selected opnotes from the log.

To access this window: COMMS pull-down menu : INCOMING OPNOTES option : OPNOTE MESSAGE LOG window (Figure6.2 -1).

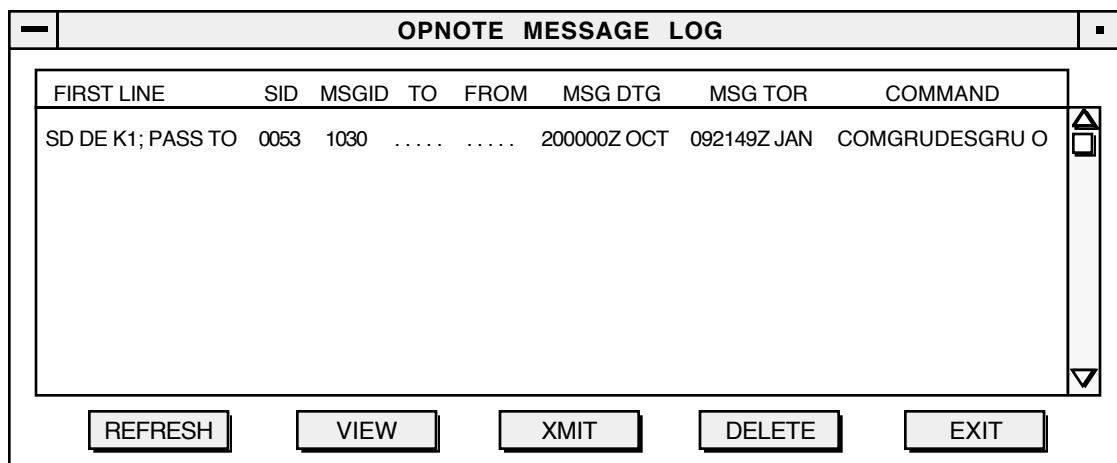


Figure6.2 -1 Opnote Message Log Window with Pop-up Menu

OPNOTE MESSAGE LOG Window Buttons

REFRESH—list messages that entered the system since selecting this option.

VIEW—raw data for an opnote.

1. Click VIEW to open the VIEW OPNOTE window.
2. Use the PGUP, PGDN, HOME, and END buttons to view the data.
3. Click EXIT to close the window.

XMIT—transmit an opnote to other locations.

1. Select the opnote to transmit.
2. Click XMIT to open the OPNOTE EDITOR window and view the contents of the opnote before transmitting.
3. Click OK in this window to open the HEADER EDIT window and begin the transmission process.
4. Click OK from the HEADER EDIT window to open the SELECT OUTPUT COMMS CHANNEL window and complete the transmission.

DELETE—opnotes from the system.

1. Select one or more opnotes from the OPNOTE MESSAGE LOG window.
2. Click DELETE.
3. The selected opnotes are removed from the list and deleted from the system.

EXIT—close the window.

OPNOTE MESSAGE LOG Window Pop-up Menu Options

Options on the OPNOTE MESSAGE LOG pop-up menu (DELETE, EXIT, PRINT, REFRESH, SELECT ALL, UNSELECT ALL, XMIT, and VIEW) perform as described in *Summary of Common Operations*. or function as buttons with the same name.

OPNOTE MESSAGE LOG Window Fields

FIRST LINE

Beginning of the first line of the opnote.

SID

Subscriber Identification Number. This is the message originator's OTCIXS subscriber identification number.

MSGID

Message Identification number, referred to as the GOLD number.

MSGID of an incoming message—derived from the sending unit.

MSGID of outgoing message—is system-generated, sequentially.

TO

Name of the intended opnote recipient.

FROM

Name of the opnote originator.

MSG DTG

Message Date-Time-Group—the date and time the originator created the opnote.

MSG TOR

Message Time of Receipt—date and time the opnote was received.

COMMAND

Name of the command originating the opnote.

6.3 OPERATOR MESSAGES

Use the OPERATOR MESSAGES option to communicate with other UB operators using “free-form” messages.

Use the EMAIL TABLE

When transmitting an OTO (operator-to-operator) message, specify an EMAIL destination (from the EMAIL TABLE) for the message. Using an EMAIL address allows greater flexibility in selecting a specific destination user instead of just a destination host.

To access this window: COMMS pull-down menu : OPERATOR MESSAGES option : OPERATOR MESSAGES window (Figure6.3-1).

OPERATOR MESSAGES

OPERATOR MESSAGE EXCHANGE

1713Z DE JOTS1 OT0 00000
THIS IS A TEST
KKKKKK

OPERATOR MESSAGE COMPOSITION

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

CLEAR **PRINT** **XMIT** **EXIT**

Figure 6.3 -1 Operator Messages Window

OPERATOR MESSAGES Window Buttons

CLEAR—delete all text from the OPERATOR MESSAGE EXCHANGE box and the OPERATOR MESSAGE COMPOSITION box.

- Deleted text cannot be retrieved.
- The next time a message is transmitted, the OTO number continues with a sequential number. It does not reset until it reaches 10,000.

PRINT—a report of the OPERATOR MESSAGE EXCHANGE box contents. Refer to Appendix A, *PRINT*, for a detailed description of this button.

XMIT—send an operator message to other workstations. Described in *OPERATOR MESSAGE COMPOSITION Box*.

EXIT—close the OPERATOR MESSAGES window and exit the option.

OPERATOR MESSAGES Window Fields

The OPERATOR MESSAGES window contains two boxes of information: OPERATOR MESSAGE EXCHANGE and OPERATOR MESSAGE COMPOSITION.

6.3.1 OPERATOR MESSAGE EXCHANGE BOX

The OPERATOR MESSAGE EXCHANGE box shows the history of correspondence between the local operator and other operators.

- Transmitted messages appear in blue and received messages in yellow.
- All messages appear in the same format—a header line, followed by one or more lines of message text, followed by an ending line.
- The header line shows the creation time of the message (hour and minute), followed by DE (radio language for “this is”), followed by the name of the host who sent the message, and ending with an OTO (operator-to-operator) sequence number.
- The OTO sequence number is unique to each host and increases by one each time the operator at that host transmits a message.
- The ending line shows KKKKKK, which is radio language for “end of message.”
- The OPERATOR MESSAGE EXCHANGE box is updated with each new message sent and with any message received from another operator.
- An alert filter may be created to set a screen alert when a message is received from another operator.
 - Select the SCREEN ALERT FILTER option from the MISC menu.
 - Click the OPERATOR MESSAGES diamond knob to set a screen alert when a message is received from another operator.

6.3.2 OPERATOR MESSAGE COMPOSITION BOX

Use the OPERATOR MESSAGE COMPOSITION box to compose messages and transmit them to other operators.

Note: CRITIC messages can be received, retransmitted, and auto forwarded—but a CRITIC message *cannot* be created within UB.

1. Type the message in the space provided.
2. Click XMIT to begin the transmission process and open the SELECT OTO OUTPUT COMMS CHANNEL window. This window lists all active machines, both LAN and EMAIL destinations.

- **Important Note:** An EMAIL comms channel must be active and running on the sending host for EMAIL entries to appear in the window. If the channel is active, all entries in the EMAIL TABLE window will appear at the top of the SELECT OTO OUTPUT COMMS CHANNEL window, followed by host entries that normally appear in this window.
- 3. Toggle the checkboxes ON for all intended message recipients.
- 4. Click OK to send the transmission or click EXIT to discard the send process. Clicking either button returns to the OPERATOR MESSAGES window.
- 5. If OK was clicked, the message appears in the OPERATOR MESSAGE EXCHANGE box.

6.4 LOG MGR INCOMING

The LOG MGR INCOMING option provides the capability to create and manage multiple incoming message logs, in addition to the system-provided Incoming Message Log.

About the LOG MGR INCOMING Option

- The LOG MGR INCOMING option functions in a similar manner to the LOG MGR OUTGOING option.
- Each received message is assigned to *one* incoming message log—either the system-provided Incoming Message Log or an operator-created log.
 - When the system is installed, all messages are assigned to the Incoming Message Log.
 - Assignment is based on operator-specified criteria. Currently, the only criterion is message type.
- A maximum of 135 incoming message logs can be created.
 - Each log may contain up to 1000 messages. The system automatically deletes older messages when a log reaches its capacity.
 - Creating multiple logs frees the Incoming Message Log of certain message types that can overload the log and cause other messages of interest to be deleted.
- Messages can be reassigned by mapping them out of the Incoming Message Log and into an operator-created log.
 - Messages also can be reassigned from one operator-created log to another operator-created log.
 - Messages received *after* the reassignment appear in the newly assigned log.

- Messages received by the log *before* reassignment remain in the original log.
- If the message type is turned OFF in a created log, incoming messages of that type will be placed in the system-created Default Log.
- Messages received by the incoming message logs are automatically processed by UB.
 - Exception: MDU, MFU, SMD1, SMD2, and SMD3 messages are logged, but not processed.

To access this window: COMMS pull-down menu : LOG MGR INCOMING option : INCOMING LOG MANAGER window (Figure6.4 -1).

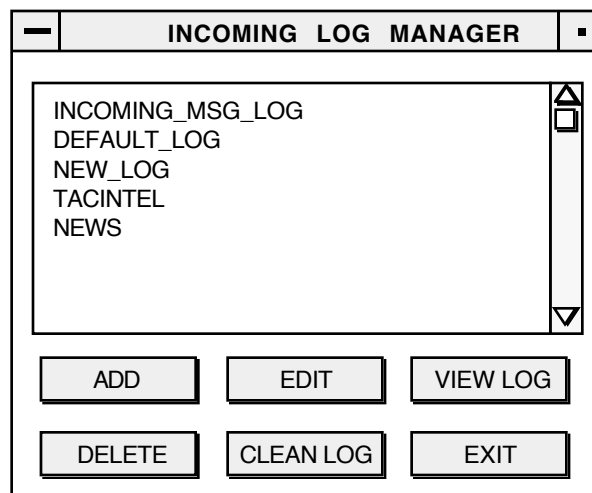


Figure6.4 -1 Incoming Log Manager Window

About the INCOMING LOG MANAGER Window:

- INCOMING MSG LOG and DEFAULT LOG are system-provided files and cannot be deleted.
- Messages in the INCOMING MSG LOG are identical to those shown in the INCOMING MESSAGE LOG window (INCOMING MSG LOG option, COMMS pull-down menu).
 - Changes made to the INCOMING MSG LOG affect the INCOMING MESSAGE LOG, and vice versa.
- The system uses the DEFAULT LOG as a temporary holding area until the operator assigns a message type (or types) to another log. (See *System-Assigned DEFAULT LOG* for additional information.)

INCOMING LOG MANAGER Window Buttons

ADD—create a new message log. Described in *Add an Incoming Message Log*.

EDIT—make changes to a log. Described in *Edit a Log*

VIEW LOG—view the contents of a log.

1. View the contents of a log in one of two ways:
 - Double-click on the log name.
 - Highlight the log name and click VIEW LOG.
2. A window equivalent to the INCOMING MESSAGE LOG window appears, with the name of the selected log in the title.
3. The fields in the INCOMING MESSAGE LOG window are described in the *INCOMING MSG LOG* section.

DELETE—a message log and its contents.

1. Select the log and click DELETE.
 - Only one log can be deleted at a time.
 - INCOMING MSG LOG and DEFAULT LOG cannot be deleted.
2. At the warning prompt click OK to delete the log and its messages, or click CANCEL to discard the delete action.
3. All message types assigned to this log (checkboxes ON) are reassigned to the DEFAULT LOG.

CLEAN LOG—delete the contents of a log without deleting the log.

1. Select the log and click CLEAN LOG.
2. At the warning prompt, click OK to delete the log's contents, or click CANCEL to discard the delete request.

EXIT—close the window and exit the option.

Incoming Log Manager Pop-Up Menu

Options on the INCOMING LOG MANAGER pop-up menu (ADD, DELETE, EDIT, VIEW LOG, CLEAN LOG, and EXIT) function the same as the buttons in this window.

6.4.1 ADD AN INCOMING MESSAGE LOG

Click ADD from the INCOMING LOG MANAGER window to open the ADD MESSAGE LOG window (Figure 6-4 -2).

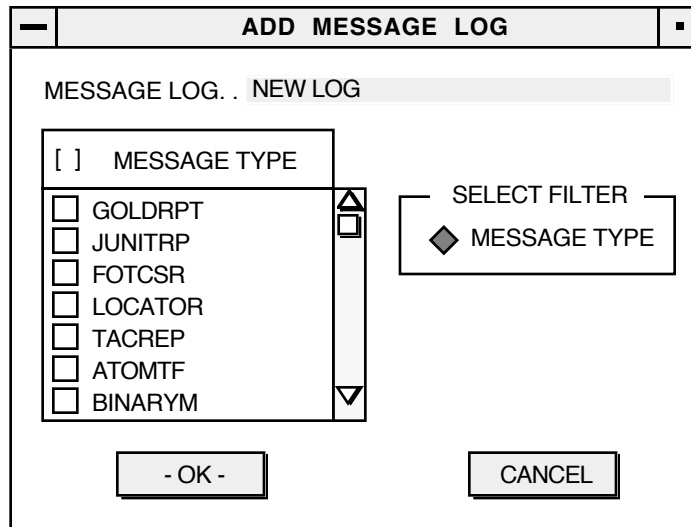


Figure 6-4 -2 Add Message Log Window

How to use the ADD MESSAGE LOG Window:

1. Enter the name of the new log in the MESSAGE LOG field.
 - The name cannot be the same as that of an existing log.
 - NEW LOG appears in the MESSAGE LOG field as the default.
2. The MESSAGE TYPE knob in the SELECT FILTER box indicates that each incoming message will be assigned to a log based on its message type.
 - Currently, the MESSAGE TYPE knob cannot be deselected.
 - This option will be expanded in future releases of the software to offer different criteria for assigning incoming messages.
3. In the MESSAGE TYPE box, toggle the checkbox ON for each message type to assign to the log.
 - If a message type is assigned to a different log, a window appears to confirm the change from that log to this one.
 - Click OK to map the message type to this log and unmap it from the other log (or click CANCEL to discard the request).

- Messages of the specified type subsequently received by the system appear in this log; messages received *before* reassignment remain in the original log.
4. Click OK to add the new incoming log or click CANCEL to discard it.

Message Types

The following MESSAGE TYPES are available from the scrolling list:

| | | | | | |
|---------|----------|---------|---------|---------|---------|
| ALMANAC | GENADMIN | JUNITRP | NUNIT | RTHRSTA | SUMAMSG |
| ATOMTF | GLDOPNT | LOCATOR | OBREP | RTHRTAS | SUBAREQ |
| BATHY | GLDOVLY | LSP | OPSKED | SATCHAR | SUBNOTE |
| BINARYM | GOLDRPT | MARREP | OTHER | SATVULN | SUBNREQ |
| CASREP | GRIDFLD | MDUMSG | PIMTRCK | SCNKILO | TACELNT |
| CHGREP | INDIGO | MFUMSG | RAINFRM | SITREP | TACREP |
| COMSPOT | JMIEOPN | MOVORD | RCSATSM | SMD1MSG | TURQUOI |
| CRITIC | JMIERPT | MOVREP | RDSND | SMD2MSG | WEX |
| FOTCSR | JTOVLY | MUNIT | RTHRSRQ | SMD3MSG | |
| FWHISKY | | | | | |

6.4.2 EDIT A LOG

1. Select the log from the list.
2. Click EDIT to open the EDIT MESSAGE LOG window. (Currently, the only selection criterion is MESSAGE TYPE.)
3. To assign a message type to this log, click its checkbox ON.
 - A confirmation window appears to verify the change.
 - Click OK to map the message type to this log (and unmap it from another log), or click CANCEL to discard the request.
4. To reassign a message type from this log, use one of two methods:
 - Click its checkbox OFF. The message type is unmapped from this log and mapped to DEFAULT LOG.
 - Go to another log and toggle this message type ON.
5. Click OK to save changes or click CANCEL to discard them.

6.4.3 SYSTEM-ASSIGNED DEFAULT LOG

Figure 6.4-3 provides an overview of the action and subsequent result(s) of assigning a message type to an operator-created log and how these actions affect the DEFAULT LOG.

- If the message type is toggled OFF in another log, messages are automatically mapped to the DEFAULT LOG.
- If the operator-created log is deleted, its message types are mapped to the DEFAULT LOG.
- The DEFAULT LOG cannot be deleted.
- A message type cannot be unmapped (checkbox turned OFF) in the DEFAULT LOG.
- To turn a checkbox OFF in DEFAULT LOG, select another log and turn the message type ON in that log. After confirming the change, the type will be unmapped from DEFAULT LOG and mapped into the new log.
- The DEFAULT LOG acts as a “safety net” to prevent the INCOMING MSG LOG from becoming overloaded when a message type is turned OFF in another log or the log is deleted.
- Operators should not leave message types in the DEFAULT LOG; instead, messages should be reassigned to a specific (operator-defined) log.

Note: The number of GOLD messages shown in Figure 6.4-3 (1-100, 101-150, etc.) are examples only. When a message type is reassigned to a new log, the first message received by the log *after* the reassignment is the next number in the system-assigned sequence, i.e., 1 to 1000.

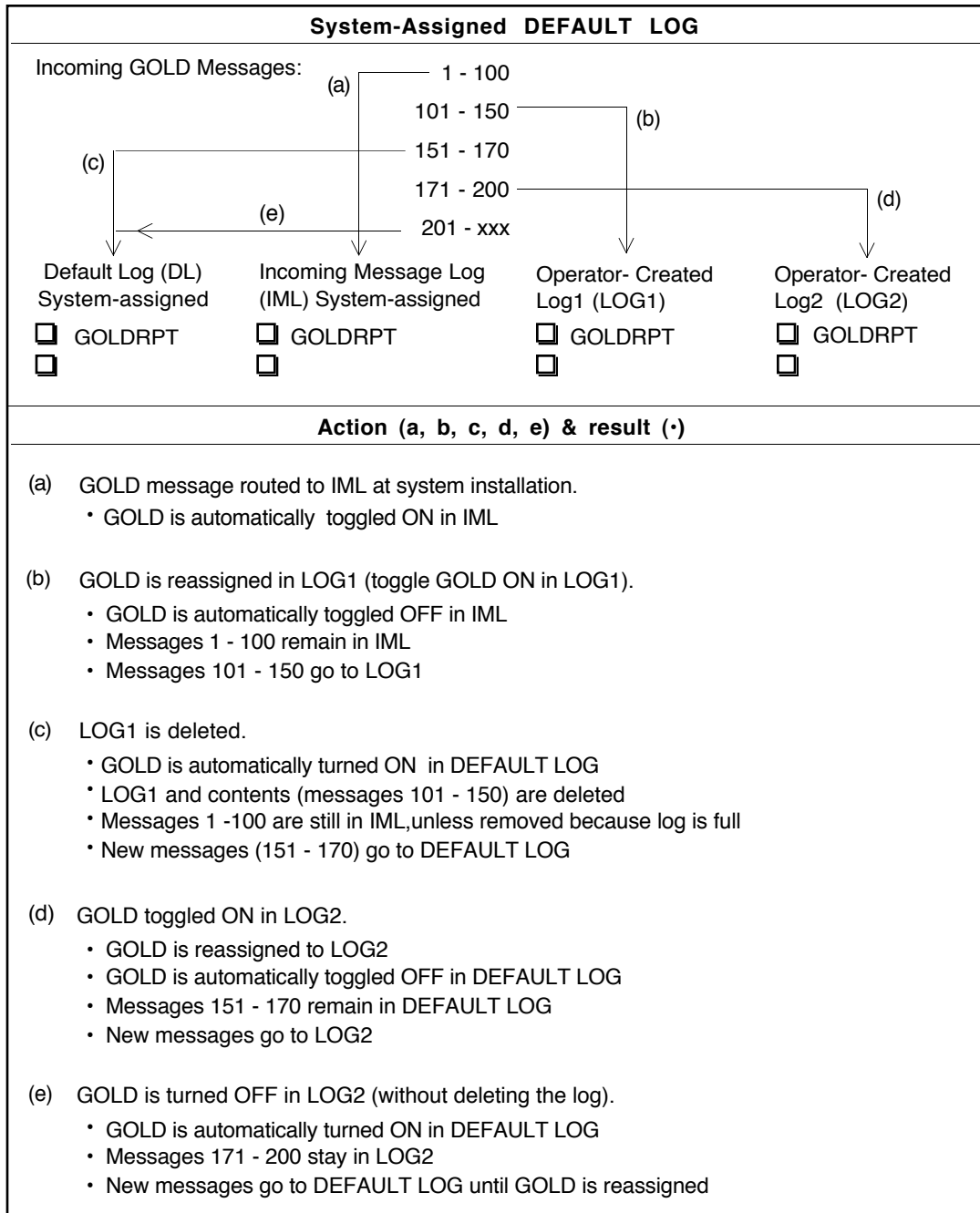


Figure 6.4-3 Using the Default Log

6.5 LOG MGR OUTGOING

This option provides the capability to create and manage multiple outgoing message logs, in addition to the main Outgoing Message Log created by the system.

About the LOG MANAGER OUTGOING Option

- The LOG MGR OUTGOING option functions in a similar manner to the LOG MGR INCOMING option.
- Each outgoing message is assigned to *one* message log—either the system-provided Outgoing Message Log or an operator-created log.
 - When the system is installed, all messages are assigned to the Outgoing Message Log.
 - Assignment is based on operator-specified criteria. Currently, the only criterion is message type.
- A maximum of 135 outgoing message logs can be created.
 - Each log contains up to 1000 messages. The system automatically deletes older messages when a log reaches its capacity.
 - Creating multiple logs frees the Outgoing Message Log of certain message types that can overload the log and cause other messages of interest to be deleted.
- Messages can be reassigned by mapping them from the Outgoing Message Log to an operator-created log.
 - Messages also can be reassigned from one operator-created log to another operator-created log.
 - Messages received *after* the reassignment appear in the newly assigned log.
 - Messages placed by the log *before* reassignment was requested remain in the original log.

To access this window: COMMS pull-down menu : LOG MGR OUTGOING option: OUTGOING LOG MANAGER window (Figure 6.5-1).

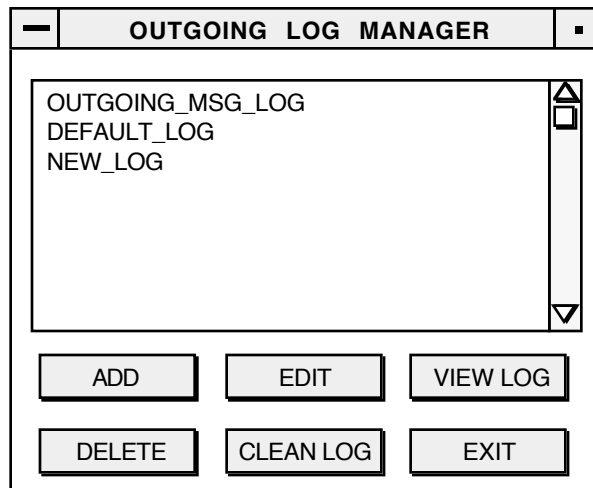


Figure6.5 -1 Outgoing Log Manager Window

About the OUTGOING LOG MANAGER Window:

- OUTGOING MSG LOG and DEFAULT LOG are system-provided files and cannot be deleted.
- The messages in OUTGOING MSG LOG are identical to those displayed in the OUTGOING MESSAGE LOG window (OUTGOING MSG LOG option on the COMMS pull-down menu).
 - Changes made to the OUTGOING MSG LOG affect the OUTGOING MESSAGE LOG, and vice versa.
- The system uses the DEFAULT LOG as a temporary holding area until the operator assigns a message type (or types) to another log.
 - If the message type is OFF in another log, messages are mapped to the DEFAULT LOG.
 - If the log is deleted, its message types are mapped to the DEFAULT LOG.
 - A message type cannot be unmapped (checkbox turned OFF) from DEFAULT LOG.
 - DEFAULT LOG cannot be deleted.
 - To turn a checkbox OFF in DEFAULT LOG, select another log and turn the message type ON in that log. After confirming the change, the type will be unmapped from DEFAULT LOG and mapped into the new log.
 - The DEFAULT LOG acts as a “safety net” to prevent the OUTGOING MSG LOG from becoming overloaded when a message type is turned OFF in another log, or the log is deleted.

- Operators should not leave message types in the DEFAULT LOG; instead, messages should be reassigned to a specific (operator-defined) log.

OUTGOING LOG MANAGER Window Buttons

ADD—create a new message log. Described in *Add an Outgoing Message Log*.

EDIT—make changes to a log.

1. Select the log from the list.
2. Click EDIT to open the EDIT MESSAGE LOG window. Currently, the only selection criterion is MESSAGE TYPE.
3. To assign a message type to this log, click its checkbox ON.
 - A confirmation window appears to confirm the change.
 - Click OK to map the message type to this log (and unmap it from another log) or click CANCEL to discard the request.
4. To reassign a message type from this log, use one of two methods:
 - Click its checkbox OFF. The message type is unmapped from this log and mapped to DEFAULT LOG.
 - Go to another log and toggle this message type ON in that log.
5. Click OK to save changes, or click CANCEL to discard them.
6. See INCOMING LOG MANAGER option, *Edit a Log*, for more details.

VIEW LOG—view the contents of a log.

1. View the contents of a log in one of two ways:
 - Double-click on the log name.
 - Highlight the log name and click VIEW LOG.
2. A window equivalent to the OUTGOING MESSAGE LOG window appears, with the name of the selected log in the title.
3. The fields in the OUTGOING MESSAGE LOG window are described in the *OUTGOING MSG LOG* section.

DELETE—a message log and its contents.

1. Select the log and click DELETE.
 - Only one log can be deleted at a time.
 - OUTGOING MSG LOG and DEFAULT LOG cannot be deleted.
2. At the warning prompt click OK to delete the log and its messages, or click CANCEL to discard the delete action.

3. All message types assigned to this log (checkboxes ON) are reassigned to the DEFAULT LOG.

CLEAN LOG—delete the contents of a log without deleting the log.

1. Select the log and click CLEAN LOG.
2. At the warning prompt, click OK to delete the log's contents, or click CANCEL to discard the delete request.

EXIT—close the window and exit this option.

Outgoing Log Manager Pop-Up Menu

Option on the OUTGOING LOG MANAGER pop-up menu (ADD, DELETE, EDIT, VIEW LOG, CLEAN LOG, and EXIT) function the same as the buttons in this window.

6.5.1 ADD AN OUTGOING MESSAGE LOG

Click ADD from the OUTGOING LOG MANAGER window to open the ADD MESSAGE LOG window (Figure 6-2).

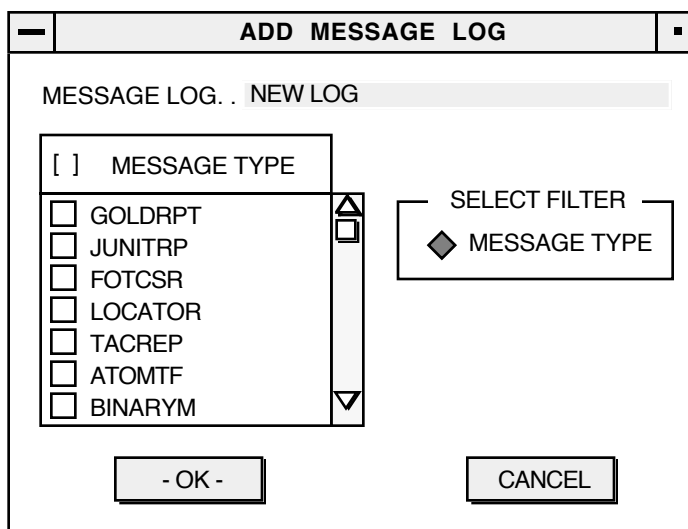


Figure 6-2 Add Message Log Window

How to use the ADD MESSAGE LOG Window:

1. Enter the name of the new log in the MESSAGE LOG field.
 - This name cannot be the same as the name of an existing log.
 - NEW LOG appears in the MESSAGE LOG field as the default.

2. The MESSAGE TYPE knob in the SELECT FILTER box indicates that each outgoing message will be assigned to a log based on its message type.
 - Currently, the MESSAGE TYPE knob cannot be deselected.
 - This option will be expanded in future releases of the software to offer different criteria for assigning outgoing messages.
3. In the MESSAGE TYPE box, click the checkbox ON for each message type to assign to the log.
 - If a message type is assigned to a different log, a window appears to confirm the change from that log to this one.
 - Click OK to map the message type to this log and unmap it from the other log (or click CANCEL to discard the request).
 - Messages of the specified type subsequently sent by the system appear in this log; messages sent *before* reassignment remain in the original log.
4. Click OK to add the outgoing log or click CANCEL to discard it.

Message Types

The following Message Types are available from the scrolling list:

| | | | | | |
|---------|----------|---------|---------|---------|---------|
| ALMANAC | GENADMIN | JUNITRP | NUNIT | RTHRSTA | SUMAMSG |
| ATOMTF | GLDOPNT | LOCATOR | OBREP | RTHRTAS | SUBAREQ |
| BATHY | GLDOVLY | LSP | OPSKED | SATCHAR | SUBNOTE |
| BINARYM | GOLDRPT | MARREP | OTHER | SATVULN | SUBNREQ |
| CASREP | GRIDFLD | MDUMSG | PIMTRCK | SCNKILO | TACELNT |
| CHGREP | INDIGO | MFUMSG | RAINFRM | SITREP | TACREP |
| COMSPOT | JMIEOPN | MOVORD | RCSATSM | SMD1MSG | TURQUOI |
| CRITIC | JMIERPT | MOVREP | RDSND | SMD2MSG | WEX |
| FOTCSR | JOTOVLY | MUNIT | RTHRSRQ | SMD3MSG | |
| FWHISKY | | | | | |

6.6 INCOMING MSG LOG (F9)

Use this option or the F9 function key to perform the following functions on messages assigned to the system-provided Incoming Message Log:

- Review and edit message text.
- Reenter messages into the system.
- Decode messages not previously processed by the system.
- Retransmit messages through another communications channel.

- Print the list of messages in the Incoming Message Log.
- Print the raw data for a received message.

The Incoming Message Log contains a maximum of 1000 messages.

- Older messages are automatically deleted by the system when more than 1000 messages have been received.
- Log entries may be viewed by all messages, last 200 messages, or last 50 messages.

To access this window: COMMS pull-down menu : INCOMING MSG LOG option: INCOMING MESSAGE LOG window (Figure6.6-1).

| INCOMING MESSAGE LOG | | | | | | | | | | | |
|---|------|-------|---|-------------|-------------|--------------|-----|--------|---------|------|---|
| <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> <p style="text-align: center;">MESSAGES</p> <p>NO MSGS 112</p> <p>LAST RECV. 031741Z AUG 95</p> <p>LIST SIZE LAST 50</p> <p>SORTED BY TIME OF RECEIPT</p> </div> | | | | | | | | | | | |
| SID | TDP# | MSGID | P | MSG DTG | MSG TOR | COMMAND | CLS | FORMAT | CHANNEL | QUAL | S |
| | | 0007 | R | 241937Z FEB | 031741Z APR | COMCRUDESGRU | 0 | U | G-DATA | | |
| | | 0006 | R | 241937Z FEB | 031741Z APR | COMCRUDESGRU | 0 | U | G-DATA | | |
| | | 0005 | R | 241934Z FEB | 031741Z APR | COMCRUDESGRU | 0 | U | G-DATA | | |
| | | 0004 | R | 241929Z FEB | 031741Z APR | COMCRUDESGRU | 0 | U | G-DATA | | |
| | | 0003 | R | 241928Z FEB | 031741Z APR | COMCRUDESGRU | 0 | U | G-DATA | | |
| | | 0002 | R | 241926Z FEB | 031740Z APR | COMCRUDESGRU | 0 | U | G-DATA | | |
| | | 0001 | R | 241926Z FEB | 031740Z APR | COMCRUDESGRU | 0 | U | G-DATA | | |
| <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid black; padding: 2px 10px;">REFRESH</div> <div style="border: 1px solid black; padding: 2px 10px;">RAW DATA</div> <div style="border: 1px solid black; padding: 2px 10px;">EXIT</div> </div> | | | | | | | | | | | |

Figure6.6 -1 Incoming Message Log Window

About the INCOMING MESSAGE LOG Window:

The scroll list contains a summary of all received messages. The list can be sorted by clicking on any column heading.

Messages are color coded for identification:

- Green—received and processed.
- Light blue—garbled; unable to determine which decoder to use.
- Magenta—MDU and MFU messages; *not* stored or processed.
- Orange—no decoder exists; messages are forwarded but not processed.
- Red—"bad" message; unable to process.

- White—deleted.
- Yellow—reprocessed.

Default column categories for the scroll list are shown in Figure 6-1:

- These categories are described in *INCOMING MESSAGE LOG Window Fields*.
- To select other categories, choose the **SELECT COLUMNS** option from the pop-up menu.
 - Refer to *INCOMING MESSAGE LOG Pop-up Menu* for a description of the additional column categories.
- To change the order of the columns, choose the **SELECT COLUMNS** option from the pop-up menu.
 - Refer to Appendix A, *SELECT COLUMNS*, for complete details about arranging the order of column categories.

INCOMING MESSAGE LOG Window Buttons

REFRESH—update the scroll list to include messages that have come into the system since the last time this option was selected.

Note: Using the **REFRESH** button affects the color of the messages listed in the window.

RAW DATA—view, edit, and transmit raw data for a message. Described in *View and Edit Raw Data*.

EXIT—exit from this option and close the window.

INCOMING MESSAGE LOG Window Pop-up Menu Options

Pop-up menu options (described in *INCOMING MESSAGE LOG Pop-up Menu*): **DEFAULT COLUMNS**, **DELETE**, **EXIT**, **LAST 50 MSGS**, **LAST 200 MSGS**, **ALL MSGS**, **PRINT ILOG LISTING**, **PRINT RAW MSG**, **RAW DATA**, **RE-PROCESS**, **RE-XMIT**, **SEARCH**, **SELECT ALL**, **SELECT COLUMNS**, and **UNSELECT ALL**.

INCOMING MESSAGE LOG Window Fields

The **MESSAGES** box contains the following fields:

NO MSGS

Number of messages received.

LAST RECV

Time the last message was received.

LIST SIZE

List size used (Last 50 Msgs, Last 200 Msgs, or All Msgs). This value is changed from the pop-up menu.

SORTED BY

Column on which the scroll list is sorted.

The following default fields are shown in the scroll list in Figure 6.6-1:

SID

Subscriber Identification Number. The message originator's OTCIXS subscriber identification number.

TDP#

Tactical Data Processor Message Serial Number. A number assigned by the originating TDP to track transmissions with the ON-143(V)6.

MSGID

Message Identification number, referred to as the GOLD number. For every incoming message, the local system assigns a unique sequential number. This number is often used as a reference for individual messages.

P

The Message Precedence code. Available codes:

| | | |
|---|---|-----------------------|
| Z | = | Flash |
| P | = | Priority |
| O | = | Operational Immediate |
| R | = | Routine |
| W | = | Critical |

Z, O, and W are higher priority messages; P and R messages are of a lower priority.

MSG DTG

Message Date-Time-Group. The date and time the originator created the message.

MSG TOR

Message Time of Receipt. The date and time the incoming message was received by the system.

COMMAND

Name of the command originating the incoming message.

CL

Message classification, up to three characters. Available classifications:

| | | |
|-----|---|---------------|
| U | = | Unclassified |
| C | = | Confidential |
| S | = | Secret |
| TS | = | Top Secret |
| SNF | = | Secret Noform |
| UNK | = | Unknown |

FORMAT

The Message Format.

These formats are *received, stored, and processed* by UB:

| | | |
|----------|---|---------------------------------|
| ATOMTF | = | Air Tasking Order |
| BINARYM | = | Binary Message |
| CRITIC | = | Critical Message |
| CASREP | = | Casualty Report |
| FOTCSR | = | FOTC SITREP |
| FWHISKY | = | Four Whiskey |
| GLDOPNT | = | Gold Opnote |
| GLDOVLY | = | Gold Overlays |
| GOLDRPT | = | Gold Report |
| JMIEOPNT | = | JMIE Opnote |
| JMIERPT | = | JMIE Report |
| JOTOVLY | = | JOTS Overlays |
| JUNITRP | = | Unit Report |
| LOCATOR | = | LOCATOR Message |
| MARREP | = | MARREP Data |
| MOVORD | = | Move Order |
| OPSKED | = | Operations Schedule |
| OTHER | = | Other |
| PIMTRCK | = | PIM Track |
| RAINFRM | = | RAINFORM Data |
| RCSATSM | = | Rec Sat Sum |
| SATCHAR | = | Satellite Charlie Elements |
| SATVULN | = | Satellite Vulnerability Message |

| | | |
|---------|---|------------------------|
| SCNKILO | = | Screen Kilo |
| SUBAMSG | = | Submarine PIM track |
| SUBAREQ | = | Submarine Area Message |
| SUBNOTE | = | Submarine Opnote |
| SUBNREQ | = | Submarine Request |
| TACELNT | = | TACELINT Message |
| TACREP | = | Tactical Report |

The following formats are *received and stored, but not processed* by UB.
Raw data for these message formats can be viewed:

BATHY
CASREP
CHGREP
COMSPOT
GENADMIN
GRIDFLD
INDIGO
LSP
MOVREP
MUNIT
NUNIT
OBREP
RDSND
RTHRSRQ
RTHRSTA
RTHRTAS
SITREP
TURQUOISE
WEX

The following formats are *received, but not stored or processed* by UB.
Raw data for these message formats cannot be viewed:

MDUMSG = MDU Message
MFUMSG = MFU Message
SMD1MSG

SMD2MSG (Replaced the IDS-9 message type. Functions in the same manner as MDUMSG and MFUMSG.)

SMD3MSG

CHANNEL

Channel over which the message was received.

QUAL

Quality of the message. Two characters are shown in this field:

1st character—a dash (-) or a C.

A dash for the first character indicates the message was received OK. If the first character is a C, the message was damaged either during transmission or reception. Use the RAW DATA button to examine the message to determine if it can be salvaged.

2nd character—a dash (-) or an R.

A dash for the second character indicates the message was received OK. If the second character is an R, either a message was received that the system doesn't recognize, or a report error was found in the incoming message. A report error shows the TOE (time of reported error), LAT, or LONG in the POS or LOB field is incorrect. Use the RAW DATA button to examine the message to determine if it can be salvaged.

S

Status code for the message.

- . Pending (may have been reprocessed)
- Not processed
- P Processed (decoded)
- D Deleted
- F Failed
- N Not stored
- S Sectioned message (see *Message Sectioning and Collating*)
- C Collated message (see *Message Sectioning and Collating*)

Message Sectioning and Collating

Message sectioning involves breaking a message into distinct, smaller messages to meet certain interfaces' message size restrictions and to transmit messages on various systems.

Message collating is the process of putting sectioned messages back together. The basic premise is that a message may contain several sections that have arrived in any order. The Collator strips the sectioned information from these messages and puts them together.

The Collator periodically checks its stored sections to see if any messages have “timed out.” All sections of a message must be received within a certain time frame—based on the precedence. If not all sections are received, the Collator will attempt to put together the available sections when the message times out. If the first section is missing, the message is not put together. The resulting message will be treated just like a complete message with the following exception:

- Where a section is missing, a message will be inserted into the text of the message: << SECTION XX OF XX MISSING FROM SECTIONED MESSAGE. >>
- An alert containing the same message will be generated.
- The time out values for the precedences are:
 - ROUTINE: 6 hours (8 minutes for testing purposes)
 - PRIORITY: 3 hours (6 minutes for testing purposes)
 - IMMEDIATE: 1 hour (4 minutes for testing purposes)
 - FLASH: 30 minutes (1 minute for testing purposes)

6.6.1 VIEW RAW DATA

To view raw data for an incoming message or messages:

1. Select messages from the INCOMING MESSAGE LOG scroll list.
 - Messages can be viewed according to the sort order of the column headings.
 - For example, to view all messages by time of receipt, click the MSG TOR column heading to sort the list in that order.
2. Click RAW DATA to open the ILOG EDITOR window and view the message data (Figure 6-2).
 - Raw data cannot be viewed for the following message type formats: ATOMTF, MDUMSG, MFUMSG, SMD1MSG, SMD2MSG, SMD3MSG.
 - ATOMTF raw data is available from the ATO MSG LOG option on the FOTC/BCST menu.
 - MDUMSG, MFUMSG, SMD1MSG, SMD2MSG, and SMD3MSG raw data is *not* available because messages of these types are not stored within UB.

3. Note: If the TRACK SUMMARY PRINT segment is loaded on the workstation, click EDIT RAW DATA from the pop-up menu to open an edit window with multiple capabilities for editing message contents.
 - To edit a message, place the cursor at the point of change.
 - Use the INSRT (insert line) button and LDEL (delete line) button to make changes.
 - Click SAVE to save any changes made to the message data, or click EXIT to close the window without saving changes.

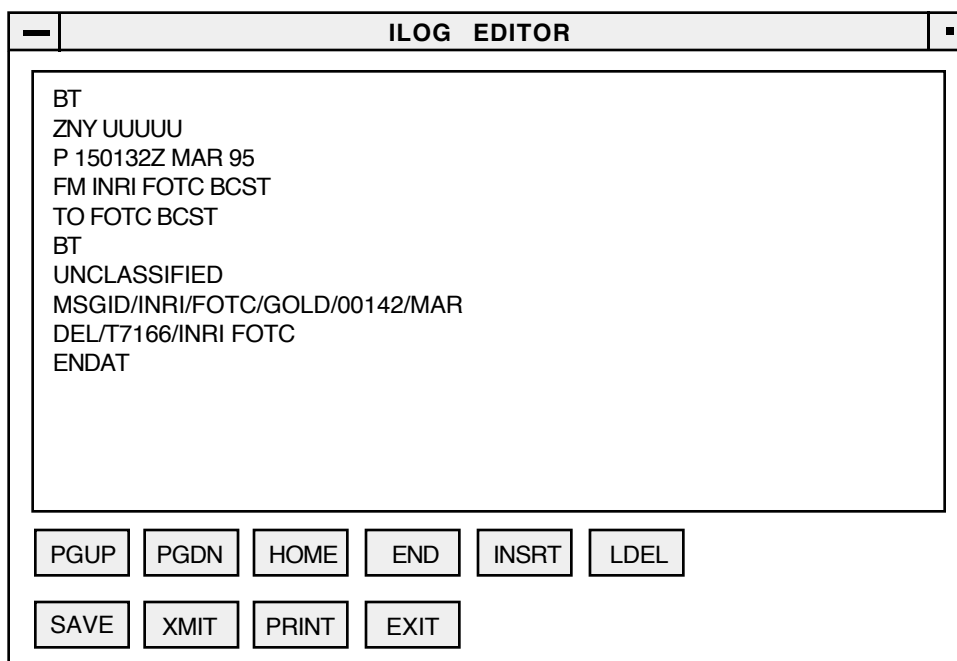


Figure 6.6 -2 ILOG Editor Window

ILOG EDITOR Window Buttons

PGUP and PGDN—show the next page of information in an upward or downward direction.

HOME—show the first page of data.

END—show the last page of data.

INSRT—insert a blank line above the currently selected line.

LDEL—delete the selected line.

SAVE—save changes.

XMIT—transmit the selected message to other locations.

PRINT—the raw data for the selected message.

EXIT—the option and close the window. Discards changes made since the last SAVE.

6.6.2 INCOMING MESSAGE LOG POP-UP MENU

In addition to the options described in *Summary of Common Operations* or described elsewhere in this chapter (DELETE, EDIT RAW DATA, PRINT ILOG LISTING, PRINT RAW MESSAGE, RAW DATA, SELECT ALL, UNSELECT ALL, and EXIT), the INCOMING MESSAGE LOG pop-up menu also includes:

SELECT COLUMNS

Specifies the columns and their order of appearance for the scroll list in the INCOMING MESSAGE LOG window. To select:

1. Choose the SELECT COLUMNS option from the pop-up menu to open the DOUBLE LIST window. (Refer to Appendix A, *SELECT COLUMNS*, for complete details about the DOUBLE LIST window.)
 - Column names appear differently in the DOUBLE LIST window than they do in the INCOMING MESSAGE LOG window.
 - The DOUBLE LIST window displays a longer version of the column name,
 - The INCOMING MESSAGE LOG window displays an abbreviated version. Both versions refer to the same column heading.
2. Set the columns and click EXIT. The INCOMING MESSAGE LOG window reappears with the selected columns in the scroll list.

In the following column descriptions, the abbreviated version is listed in bold. The long version is shown in parenthesis.

FROM

(FROM (FM)). Command of the message sender. This is the entry in the FM field in the JANAP header of the message.

SRC

(CHANNEL XREF). A three-letter code associated with the network that sent the message—the DDN source ID number. It identifies the specific machine from which the message was sent.

TO

(TO (JANAP)). First addressee of the message. This is helpful in identifying the main addressee if the message was sent to more than one location.

V6#

(V6 NUMBER). V6 message serial number.

For older V6's, this number is provided after the V6 accepts a message from UB.

For newer V6's, this number is the same as the TDP#.

MSG TOP

(TIME OF PROCESS). Time the message was decoded (for all messages except opnotes).

If the message is an opnote, shows the time when the message was read. If the message has not yet been read, this column is blank.

AD1-AD5

(OTC/TAT ADDEES). All SIDs where the message originator sent the message.

OID

(OPERATOR ID). If the message has been viewed, shows the operator ID of the person who viewed the message. If the message has not yet been read, this column is blank.

AP

(AUTO-PRINTED). If the message has been auto-printed, shows YES. If it has not been auto-printed, shows NO. (Auto-printing can be set through the INPUT MESSAGE FILTERS option.)

VFMT

(V6 FORMAT NUMBER). The V6 format number—specifies the OTH DCT message format number.

I

(INT/EXT SOURCE). Shows I if the message source was internal, or E if the source was external.

VAL

(MSG VALID). Displays information pertinent only to the SUBJOTS segment. "Dots" will appear in the field for UB information.

DEFAULT COLUMNS

Changes the columns and their order of appearance in the INCOMING MESSAGE LOG window back to the system default settings. Default columns are shown in Figure 6.6 -1.

SEARCH

Searches messages in the Incoming Message Log for a particular string of characters. Select SEARCH from the pop-up menu to open the SEARCH ENTRY window (Figure 6.6-3).

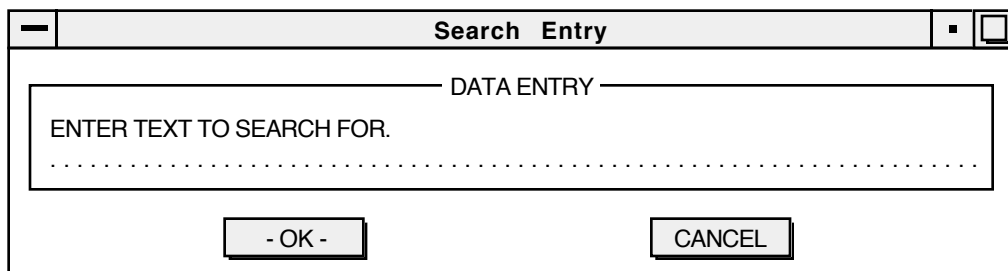


Figure 6.6 -3 Search Entry Window

How to use the SEARCH ENTRY window:

1. Enter up to 70 alphanumeric characters in the ENTER TEXT TO SEARCH FOR field.
2. Click OK.
3. A timer window appears to indicate that a search is in progress. If the search takes more time than can be allotted, click CANCEL to stop the search action.
4. The INCOMING MESSAGE LOG window reappears with those messages that match the entered text.

Note: OR searches can be performed within the SEARCH ENTRY window by using the “|” character as OR.

For example, to search for all messages that contain the words OPNOTE or OVERLAY, enter OPNOTE | OVERLAY in the ENTER TEXT TO SEARCH FOR field.

RE-XMIT

Most messages that appear in the INCOMING MESSAGE LOG can be retransmitted to another location. (Exception: Messages of format type IDS9MSG, MDUMSG, and MFUMSG.)

1. Select one or more messages from the scroll list, and select RE-XMIT from the pop-up menu.
 - This opens the SELECT OUTPUT COMMS CHANNEL window.
 - The retransmitted messages use the same message header information as when they were originally sent.
2. Toggle the checkboxes ON for any output channels to send these messages through.
3. Click OK to retransmit the messages.

RE-PROCESS

Reprocess a message to reflect changes made, such as editing a track contact message, or to decode a message not previously processed by the system

1. Select one or more messages from the INCOMING MESSAGE LOG scroll list.
2. Select RE-PROCESS from the pop-up menu.
3. Each reprocessed message appears as a new line in the INCOMING MESSAGE LOG window. This new line is shown in yellow to indicate it is a reprocessed message.

Messages of format types IDS9MSG, MDUMSG, and MFUMSG cannot be reprocessed.

LAST 50 MSGS, LAST 200 MSGS, ALL MSGS

Use the LAST 50 MSGS, LAST 200 MSGS, and ALL MSGS options to specify the number of messages that appear in the scroll list. Choose one of these options. If another is chosen, it overrides the previous setting.

LAST 50 MSGS—limits the number of message lines shown in the scroll list to 50. By limiting the scroll list to 50 messages, processing time is faster. The system still holds 1000 incoming messages, but they are split into individual groups of 50 messages.

LAST 200 MSGS—limits the number of message lines shown in the scroll list to 200. Processing time is faster than the ALL MSGS option, but slower than the LAST 50 MSGS option. The system still holds 1000 incoming messages, but they are split into individual groups of 200 messages.

ALL MSGS—sets the number of message lines shown in the scroll list to 1000. Processing time is much slower with this option than the LAST 50 MSGS or LAST 200 MSGS option. When this option is used, all incoming messages are listed.

6.7 OUTGOING MSG LOG

Use this option to perform the following functions on messages sent from the system-provided Outgoing Message Log:

- Review and edit message text.
- Reenter messages into the system.
- Retransmit messages through another communications channel.
- Print the list of messages in the Outgoing Message Log.
- Print the raw data for a transmitted message.

The Outgoing Message Log contains a maximum of 1000 messages.

- When more than 1000 messages have been received, older messages are automatically deleted by the system.
- The log entries may be viewed by: all messages, last 200 messages, or last 50 messages.

To access this window: COMMS pull-down menu: OUTGOING MSG LOG option : OUTGOING MESSAGE LOG window (Figure6.7 -1).

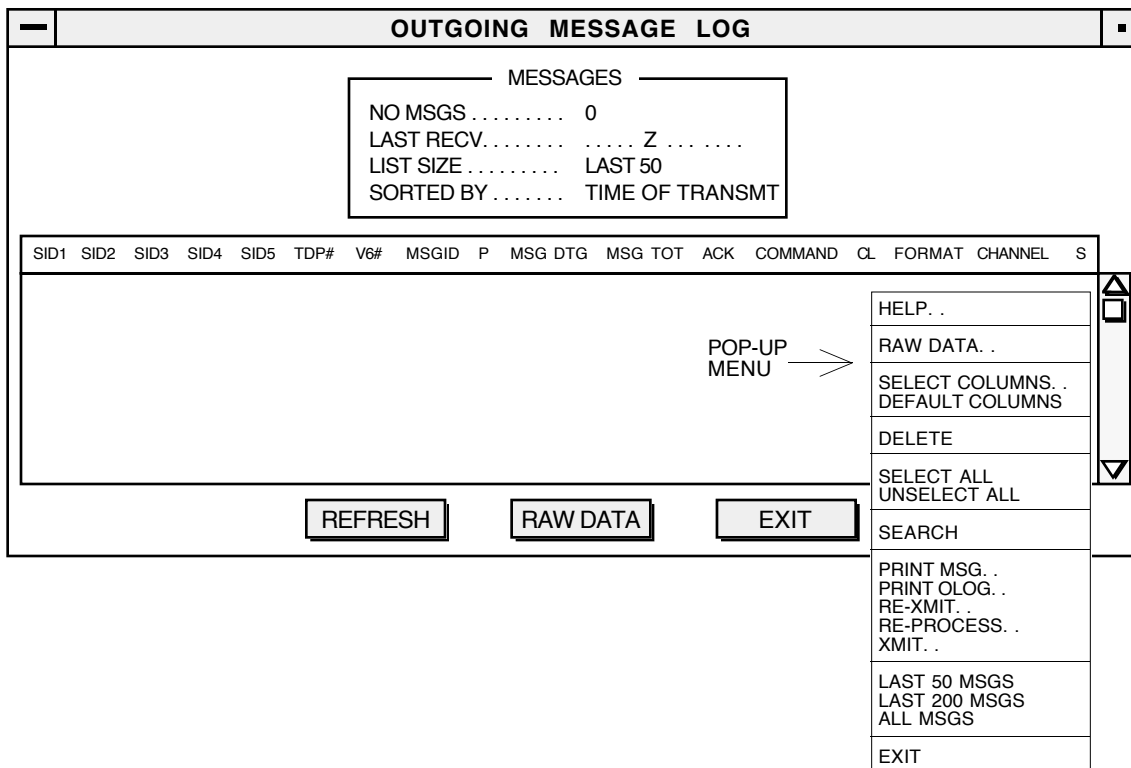


Figure6.7 -1 Outgoing Message Log Window with Pop-up Menu

About the OUTGOING MESSAGE LOG Window:

The scroll list contains a summary of all messages that have been sent. The list can be sorted by clicking on any column heading.

Messages are color-coded for identification. Initially, all messages are shown in light blue; however, as messages are retransmitted or deleted, the color changes and the status column ("S") changes to indicate the message status:

- Light blue (and X in "S" column)—sent
- White—deleted
- Light blue (and • in "S" column)—pending
- Yellow—retransmitted.

If the message has an X (transmitted) in the S column, and no time listed in the MSG TOT column:

- The message has been sent to the V6 queue but it has not yet been sent out.
- This type of message must be deleted here *and* from the V6 queue to prevent it from being sent out.

Default column categories for the scroll list are shown in Figure 6-7-1.

- These categories are described in *OUTGOING MESSAGE LOG Window Fields*.
- To select other categories, choose the SELECT COLUMNS option from the pop-up menu.
 - Refer to *OUTGOING MESSAGE LOG Pop-up Menu* for a description of the additional column categories.
- To change the order of the columns, choose the SELECT COLUMNS option from the pop-up menu.
 - Refer to Appendix A, *SELECT COLUMNS*, for complete details about arranging the order of column categories.

OUTGOING MESSAGE LOG Window Buttons

REFRESH—update the scroll list to include messages that have come into the Outgoing Message Log since the last time this option was selected.

RAW DATA—view, edit, and transmit raw data for a message. Described in *View and Edit Raw Data*.

EXIT—exit from this option and close the window.

OUTGOING MESSAGE LOG Window Pop-up Menu Options

Pop-up menu options (described in *INCOMING MESSAGE LOG Pop-up Menu*): DEFAULT COLUMNS, DELETE, EXIT, LAST 50 MSGS, LAST 200 MSGS, ALL MSGS, PRINT OLOG, PRINT MSG, RAW DATA, RE-PROCESS, RE-XMIT, SEARCH, SELECT ALL, SELECT COLUMNS, UNSELECT ALL, and XMIT.

OUTGOING MESSAGE LOG Window Fields

The MESSAGES box contains the following fields:

NO MSGS

Number of messages that have been transmitted.

LAST SENT

Time the last message was transmitted.

LIST SIZE

List size used. Last 50 Msgs, Last 200 Msgs, or All Msgs. See *Incoming Msg Log* for more information.

SORTED BY

Column on which the scroll list is sorted.

The following default columns are shown in the list in Figure 6.7-1:

SID1 - SID5

Subscriber Identification Numbers. The OTCIXS subscriber identification numbers for the intended recipients of the outgoing message.

An extra space is available in these fields to show an acknowledgment code for the message:

- Character can be either blank, or can display an A or N.
- If A is shown, this SID has acknowledged receipt of the message.
- If N is shown, an acknowledgment has been received, but there was a problem with the message. The message should be resent.

TDP#

Tactical Data Processor Message Serial Number. A number assigned by UB to track transmissions with the ON-143(V)6.

V6#

V6 message serial number. For older V6's, this message is provided after the V6 accepts a message from UB. For newer V6's, this number is the same as the TDP#.

MSGID

Message Identification number, referred to as the GOLD number. For every outgoing message, UB assigns a unique sequential number, often used as a reference for individual messages.

P

Message Precedence code.

Z = Flash

P = Priority

O = Operational Immediate

R = Routine

W = Critical

Z, O, and W are higher priority messages; P and R messages are of a lower priority.

Note: Z should not be used for daily message traffic. Refer to command Standard Operating Procedures (SOP) for use of Flash precedence.

MSG DTG

Message Date-Time-Group. The date and time the message was created.

MSG TOT

Message Time of Transmission. When the outgoing message leaves the V6 queue, a DTG is shown in the MSG TOT column. Presence of a DTG indicates OTCIXS Net Control station has received the transmitted message. If the MSG TOT is blank, the outgoing message should be in the V6 queue awaiting transmission.

ACK

Acknowledgment status of the transmission.

- If no SID has acknowledged receipt of the transmission, this column is blank.
- If at least one of the SIDs sends back an acknowledgment message and the message was received, this column displays ACK.

COMMAND

Name of the command originating the outgoing message.

CL

Message Classification, up to three characters. Available classifications:

U = Unclassified

C = Confidential

| | | |
|-----|---|---------------|
| S | = | Secret |
| TS | = | Top Secret |
| SNF | = | Secret Noform |
| UNK | = | Unknown |

FORMAT

Format of the outgoing message.

| | | |
|----------|---|---------------------------------|
| ATOMTF | = | Air Tasking Order |
| BINARYM | = | Binary Message |
| CRITIC | = | Critical Message |
| CASREP | = | Casualty Report |
| FOTCSR | = | FOTC SITREP |
| FWHISKY | = | Four Whiskey |
| GLDOPNT | = | Gold Opnote |
| GLDOVLY | = | Gold Overlays |
| GOLDRPT | = | Gold Report |
| GRIDFLD | = | Gridded Field |
| JMIEOPNT | = | JMIE Opnote |
| JMIERPT | = | JMIE Report |
| JOTOVLY | = | JOTS Overlays |
| JUNITRP | = | Unit Report |
| LOCATOR | = | LOCATOR Message |
| MARREP | = | MARREP Data |
| MOVORD | = | Move Order |
| OPSKED | = | Operations Schedule |
| OTHER | = | Other |
| PIMTRCK | = | PIM Track |
| RAINFRM | = | RAINFORM Data |
| RCSATSM | = | Rec Sat Sum |
| SATCHAR | = | Satellite Charlie Elements |
| SATVULN | = | Satellite Vulnerability Message |
| SCNKILO | = | Screen Kilo |
| SUBAMSG | = | Submarine PIM track |

| | | |
|---------|---|------------------------|
| SUBAREQ | = | Submarine Area Message |
| SUBNOTE | = | Submarine Opnote |
| SUBNREQ | = | Submarine Request |
| TACELNT | = | TACELINT Message |
| TACREP | = | Tactical Report |

CHANNEL

Channel over which the message will be transmitted.

S

Status code for the message.

- . Pending (not sent—could be that window is not refreshed)
- D Deleted
- X Transmitted
- S Sectioned message
- C Collated message

6.7.1 VIEW AND EDIT RAW DATA

To view or edit the raw data for an outgoing message or messages:

1. Select messages from the OUTGOING MESSAGE LOG scroll list.
 - Messages can be viewed or edited according to the sort order of the column headings.
 - For example, to view all messages by time of receipt, click the MSG TOR column heading to sort the list in that order.
2. Click RAW DATA to open the OLOG EDITOR window (Figure 6.7-2).
3. To edit the message:
 - Place the cursor at the point of change.
 - Use the LDEL (line delete) and INSRT (insert) buttons to make editing changes
 - Click SAVE (or click EXIT to close the window without saving changes).

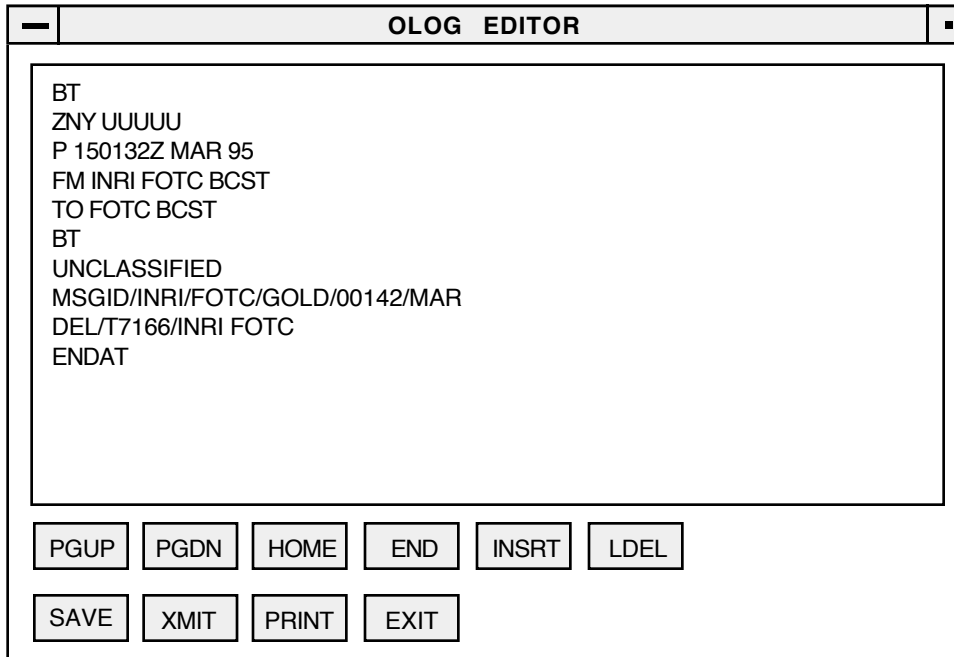


Figure 6.7 -2 OLOG Editor Window

OLOG EDITOR Window Buttons

PGUP and PGDN—show the next page of information in an upward or downward direction.

HOME—show the first page of data.

END—show the last page of data.

INSRT—insert a blank line above the currently selected line.

LDEL—delete the selected line.

SAVE—save changes.

XMIT—transmit the message to other locations.

PRINT—the raw data for the selected message.

EXIT—leave the option and close the window. Discards changes made since the last SAVE.

6.7.2 OUTGOING MESSAGE LOG POP-UP MENU

In addition to the options described in *Summary of Common Operations* (EXIT, PRINT MSG, PRINT OLOG, RAW DATA, SELECT ALL, and UNSELECT ALL), options on the OUTGOING MESSAGE LOG pop-up menu also includes:

SELECT COLUMNS

Specifies the columns and their order of appearance for the scroll list in the OUTGOING MESSAGE LOG window.

To select the columns and their order of appearance:

1. Choose the SELECT COLUMNS option from the pop-up menu to open the DOUBLE LIST window. (Refer to Appendix A, *SELECT COLUMNS*, for complete details about the DOUBLE LIST window.)
2. Set the columns and click EXIT. The OUTGOING MESSAGE LOG window reappears with the selected columns in the scroll list.

Available columns include the default columns which were described earlier, and additional columns described below.

- Column names appear differently in the DOUBLE LIST window than they do in the OUTGOING MESSAGE LOG window.
- The DOUBLE LIST window displays a longer version of the column name.
- The OUTGOING MESSAGE LOG window displays an abbreviated version. Both versions refer to the same column heading.

In the following column descriptions, the abbreviated version is listed in bold. The long version is shown in parenthesis.

FROM

(FROM/FM). Command of the message sender. This is the entry in the FM field in the JANAP header of the message, as entered in the FM field in the HEADER EDIT window.

DST

(CHANNEL XREF). XREF for the channel used to send the message.

TO

(TO (JANAP)). First addressee of the message. This is helpful in identifying the main addressee when the message is sent to more than one location.

VFMT

(V6 FORMAT NUMBER). V6 format number. This specifies the OTH DCT message format number.

TIME QUEUED

Time the message was entered into the OLOG.

DEFAULT COLUMNS

Changes the columns and their order of appearance in the OUTGOING MESSAGE LOG window to the system default settings. Default columns are shown in Figure 6.7-1.

DELETE

1. Select one or more messages from the OUTGOING MESSAGE LOG scroll list.
2. Select the DELETE option from the pop-up menu.
3. The selected messages are no longer accessible to the user and are displayed in white.

When a message has an X (for transmitted) in the S column, and no time listed in the MSG TOT column:

- The message has been sent to the V6 queue but it has not yet been sent out.
- This type of message must be deleted here *and* from the V6 queue to prevent it from being sent out.

RE-XMIT

Any messages that appears in the OUTGOING MESSAGE LOG can be retransmitted.

1. Select one or more messages from the scroll list, and select RE-XMIT from the pop-up menu.
 - This opens the SELECT OUTPUT COMMS CHANNEL window.
 - The retransmitted messages use the same message header information as when they were originally sent.
2. Toggle the checkboxes ON for any output channels to send these messages through.
3. Click OK to retransmit the messages.
4. A new line (shown in yellow) appears for the message in the OUTGOING MESSAGE LOG window if the message is retransmitted successfully.

RE-PROCESS

Reprocesses messages listed in the OUTGOING MESSAGE LOG window so they are sent back through the correlator.

1. Select one or more messages from the OUTGOING MESSAGE LOG scroll list.
2. Select RE-PROCESS from the pop-up menu.
3. If a message is reprocessed, a new line (shown in yellow) appears for the message in the INCOMING MESSAGE LOG window.

XMIT

Transmits a message from the OLOG to other locations. (Note: The RE-XMIT option retransmits the message to the *original* destination.)

1. Select one or more messages.
2. Click XMIT to open the HEADER EDIT window.
3. Make changes as necessary, then click OK to start the transmission process.
4. Refer to Appendix A, *XMIT*, for complete details about transmissions.

LAST 50 MSGS, LAST 200 MSGS, ALL MSGS

LAST 50 MSGS, LAST 200 MSGS, and ALL MSGS options to specify the number of messages that appear in the scroll list. Choose one of these options. If another option is chosen, it overrides the previous setting.

LAST 50 MSGS—limits the number of message lines shown in the scroll list to 50. By limiting the scroll list to 50 messages, processing time is faster. The system still holds 1000 incoming messages, but they are split into individual groups of 50 messages.

LAST 200 MSGS—limits the number of message lines shown in the scroll list to 200. Processing time is faster than the ALL MSGS option, but slower than the LAST 50 MSGS option. The system still holds 1000 incoming messages, but they are split into individual groups of 200 messages.

ALL MSGS—sets the number of message lines shown in the scroll list to 1000. Processing time is much slower with this option than the LAST 50 MSGS or LAST 200 MSGS option. When this option is used, all incoming messages are listed.

SEARCH

Searches messages in the Outgoing Message Log for a particular string of characters. Select SEARCH from the pop-up menu to open the SEARCH ENTRY window (Figure 6.7-3).

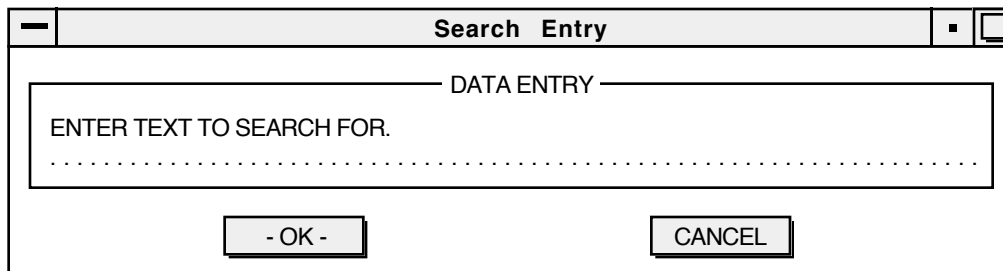


Figure6.7 -3 Search Entry Window

How to use the SEARCH ENTRY window:

1. Enter up to 70 alphanumeric characters in the ENTER TEXT TO SEARCH FOR field.
2. Click OK.
3. A timer window appears to indicate that a search is in progress. If the search takes more time than can be allotted, click CANCEL to stop the search action.
4. The OUTGOING MESSAGE LOG window reappears with those messages that match the entered text.

Note: OR searches can be performed within the SEARCH ENTRY window by using the “|” character as OR. For example, to search for all messages that contain the word OVERLAY or OPNOTE, enter OVERLAY|OPNOTE.

6.8 MSG HEADERS

Use the MSG HEADERS option to:

- Specify general outgoing message header information, such as: sender, recipient, security classification, and precedence.
- Save headers for reuse.
- Set a default header.

To access this window: COMMS pull-down menu : MSG HEADER option: EDIT HEADERS window (Figure6.8-1).

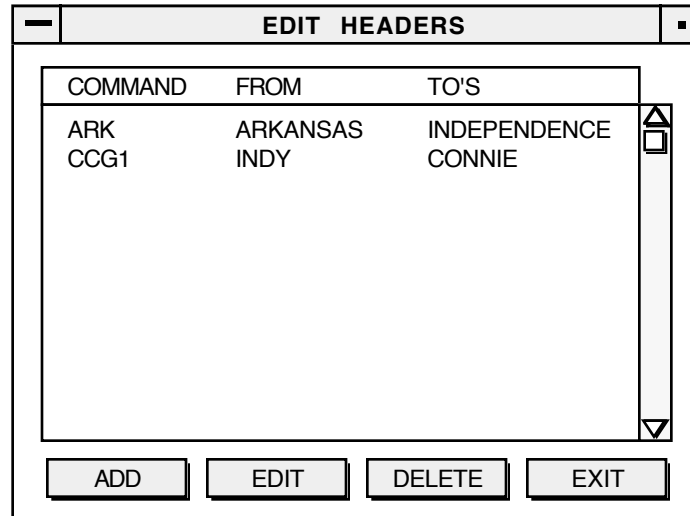


Figure 6.8 -1 Edit Headers Window

The EDIT HEADERS window lists all message headers in the system. If a default header is set, an asterisk (*) appears to the left of its COMMAND in the scroll list.

EDIT HEADERS Window Buttons

ADD—a message header. Described in *Create a Message Header*.

EDIT—a message header.

1. Select a header from the EDIT HEADERS list.
2. Click EDIT.
3. The HEADER EDIT window opens to make changes. (Options to edit a header are the same as those to add a header.)
4. Click OK to accept changes, or click CANCEL to discard them.

DELETE—a message header.

1. Select one or more message headers from the EDIT HEADERS window.
2. Click DELETE.
 - At the confirmation window, click OK to continue the delete action.
 - The selected message headers are removed from the system.

EXIT—the option and close the window.

- Message headers are shared within a network; therefore, when EXIT is clicked changes are automatically reflected on all workstations in that network. (Refer to Appendix A, *EXPORT*, for more details.)

EDIT HEADERS Window Pop-up Menu Options

Pop-up menu options (described in *EDIT HEADERS Pop-up Menu*): ADD, ARCHIVE, COPY, DELETE, EDIT, EXIT, EXPORT, HELP, PRINT, PRINT HEADERS, RESTORE, SELECT ALL, and UNSELECT ALL.

EDIT HEADER Window Fields

The following fields are shown for each of the message headers:

COMMAND

Name of the local command.

FROM

Site or command sending the message.

TO'S

Lists the first message destination. (A maximum of five destinations may be specified in the header.)

6.8.1 CREATE A MESSAGE HEADER

Click ADD to open the HEADER EDIT window (Figure 6-8-2).

HEADER EDIT

FM:

TO:

TO:

TO:

TO:

TO:

TO:

CLASSIFICATION

PRECEDENCE

UNCLASSIFIED

CONFIDENTIAL

SECRET

SECRET NF

TOP SECRET

ROUTINE

PRIORITY

IMMEDIATE

FLASH

LOCAL CMD:

- OK -

CANCEL

Figure 6-8-2 Header Edit Window

How to use the HEADER EDIT window:

1. Use one of the following methods to specify message header information:
 - Recall the *default* header information using the RECALL DEFAULT pop-up option. (If a default header exists, the data appears in the HEADER EDIT window when it opens.)
 - Recall *saved* header information using the RECALL pop-up option.
 - Enter *new* information in the fields, then click the appropriate diamond knobs for CLASSIFICATION and PRECEDENCE.
2. Optional: After data is entered, use the SET DEFAULT pop-up option to retain the information as the default message header for later use.
 - Note: Click OK or SAVE from the pop-up menu (after SET DEFAULT) for the default header to appear in the EDIT HEADERS window. If OK or SAVE is not clicked, the default header is set but does not appear in the EDIT HEADERS window.
3. Click OK to accept the header, or click CANCEL to discard it. By clicking OK, the information is saved and the EDIT HEADERS window opens automatically.
 - Since message headers are shared within a network, any modifications (e.g., adding, editing and deleting of message headers) will be automatically reflected on all workstations on that network.

HEADER EDIT Window Pop-up Menu Options

Pop-up menu options (described in HEADER EDIT Pop-up Menu): CANCEL, OK, PRINT, RECALL, RECALL DEFAULT, SAVE, and SET DEFAULT.

HEADER EDIT Window Fields

FM

Message origin; individual site or command may be entered.

TO

Five TO fields specify destinations for the message. Individual sites or commands may be entered.

CLASSIFICATION Box

Security classification of the message—UNCLASSIFIED, CONFIDENTIAL, SECRET, or TOP SECRET.

PRECEDENCE Box

Precedence of the message—ROUTINE, PRIORITY, IMMEDIATE, or FLASH.

LOCAL CMD

Local command name.

6.8.1.1 HEADER EDIT Pop-Up Menu

In addition to the options described in *Summary of Common Operations* (HELP, OK, PRINT, and CANCEL), the HEADER EDIT pop-up menu also includes:

SET DEFAULT

Saves the current settings as the default header information. These settings appear in the HEADER EDIT window when it opens, and can be quickly recalled later with the RECALL DEFAULT option.

RECALL DEFAULT

Recalls the default header settings and fills them into the HEADER EDIT window, overwriting any header information currently in the window.

SAVE

Saves a copy of the information shown in the HEADER EDIT window. The information can be retrieved with the RECALL option.

RECALL

Recalls a header previously stored by the SAVE pop-up option from the HEADER EDIT window.

Choose the RECALL option to open the RECALL HEADER window (Figure 6.8-3).

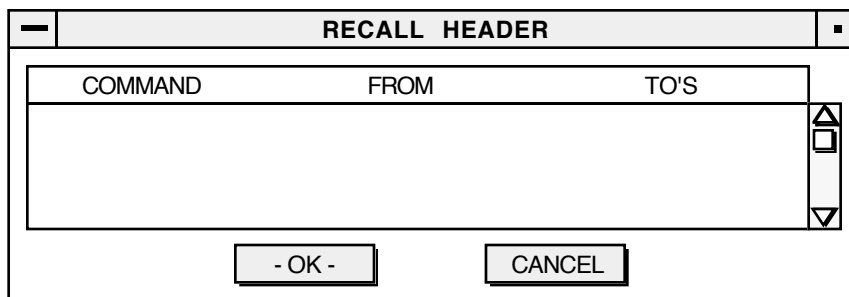


Figure 6.8-3 Recall Header Window

How to use the RECALL HEADER window:

1. Select a header from the list.
2. Click OK to retrieve it. (Or click CANCEL to cancel the recall operation.)

3. The selected header is retrieved and its values are filled into the fields in the HEADER EDIT window.

6.8.2 EDIT HEADERS POP-UP MENU

In addition to the options described in the *Summary of Common Operations* (ADD, ARCHIVE, COPY, EDIT, EXIT, DELETE, PRINT, RESTORE, SELECT ALL, and UNSELECT ALL) the EDIT HEADERS pop-up menu also includes:

EXPORT

The EXPORT option appears shaded in the pop-up menu, which means it cannot be selected. If changes are made in the MSG HEADERS option, they are automatically sent to all other workstations on the LAN when EXIT is clicked from the EDIT HEADERS window. (Refer to Appendix A, *EXPORT*, for more details.)

6.9 AUTO-FORWARD TABLE

Use the Auto-Forward Table to automatically forward specific types of incoming and outgoing messages to selected destinations.

- When a message enters the system or is transmitted out, it is checked against the active entries in the Auto-Forward table for a match.
- If there is a match of the source channel, source, and message type, the message is transmitted to the destinations in the Auto-Forward Table entry.
- Up to 500 entries are allowed in the Auto-Forward table.

The system ensures that auto-forwarding does not create message loops. Before a message is auto-forwarded, the sending station is removed from the auto-forward TO list so it does not receive the message again.

There are several points to remember about the Auto Forward Table, including the following:

- For each broadcast, an auto forward entry must exist and must match the FROM or TO line in the Broadcast Header window. A Broadcast will not activate unless an auto forward entry is properly configured and active.
- A broadcast can send only Platform tracks. To automatically send other message types, such as Overlay, PIMTrack and OPNOTE, an auto forward entry must be configured and active.

- Auto-forwarding should not be activated unless absolutely necessary. Unnecessary or improperly configured auto forward entries can cause excessive network loading or “data ringing,” where messages are continuously forwarded back and forth.

To access this window: COMMS pull-down menu : AUTO-FORWARD TABLE option : MESSAGE AUTO FORWARD window (Figure6.9 -1).

| SRC CHANL | SRC CRIT: DATA | DES CHANL | SID1 | SID2 | SID3 | SID4 | SID5 | STATUS |
|-----------|----------------|------------|------|------|------|------|------|--------|
| ALL | ALL | OTCIXS | 0100 | 0100 | 0100 | 0100 | 0100 | OFF |
| ALL | ALL | GENSERPOST | .... | .... | .... | .... | .... | OFF |
| ALL | TO: TEST | GENSERPOST | .... | .... | .... | .... | .... | ON |

ADD EDIT DELETE OWNERSHIP EXIT

Figure6.9 -1 Message Auto Forward Window with Pop-up Menu

The MESSAGE AUTO FORWARD window manages all entries in the Auto-Forward table. Active entries display in light blue and inactive entries display in white.

MESSAGE AUTO FORWARD Window Buttons

ADD— an entry to the Auto-Forward table. Described in *Add Entries*.

EDIT—a table entry.

1. Select an entry from the MESSAGE AUTO FORWARD window list.
2. Click EDIT to open the EDIT AUTO FORWARD window.
3. Make changes to the table entry. Options to edit an entry are the same as those to add.
4. Click OK to save any changes, or click CANCEL to discard them.

DELETE—a table entry.

1. Select one or more entries from the scroll list.

2. Click DELETE. The entries are removed from the system.

OWNSHIP—enter all the aliases of the ship designated as OWNSHIP.

1. Click OWNSHIP to open the ADDEE EDIT window.
2. In the TO fields, enter all the aliases for *your* ship or location.
3. Click OK to accept the entries. (Or click CANCEL to discard them.)
4. If any of these aliases are in the TO fields of an auto-forwarded message they will be removed before the message is sent.

EXIT—exit the option and close the window.

MESSAGE AUTO FORWARD Window Pop-up Menu Options

Pop-up menu options (described in *MESSAGE AUTO FORWARD Pop-up Menu*): ACTIVATE, ADD, ARCHIVE, DE-ACTIVATE, DELETE, EDIT, EXIT, EXPORT, PRINT, RESTORE, SELECT ALL, UNSELECT ALL, and XMIT.

MESSAGE AUTO FORWARD Window Fields

The following fields of information are shown for the messages:

SRC CHANL

Source channel where the message is received.

SRC CRIT: DATA

Source type and specific source.

DES CHANL

Message channel to forward the message.

SID1-SID5

The SIDs where the message will be sent.

STATUS

ON—messages are forwarded based on the criteria for the entry.

OFF—messages are not checked or forwarded based on the criteria for the entry.

6.9.1 ADD ENTRIES

Click ADD from the MESSAGE AUTO FORWARD window to open the ADD AUTO FORWARD window (Figure 6.9-2).

ADD AUTO FORWARD

SRC CHANNEL LOCAL ☐ ON/OFF ☐

SOURCE

☐ TO
☐ FROM
☐ COMMAND ..
☐ SID
☐ DDN HOST ..
☐ BE3
☒ ALL

MSG TYPE

☒ GOLDRPT
☒ RAINFRM
☒ MARREP
☒ GLDOVLY
☒ JOTOVLY
☒ FOTCSR
☒ PIMTRCK

PRECEDENCE

☐ ROUTINE
☐ PRIORITY
☐ IMMEDIATE
☐ FLASH
☐ CRITIC

DESTINATION

CHANNEL ☐ OTCIXS

3 DIG SIDS

.....

.....

.....

.....

.....

- OK - CANCEL

Figure6.9 -2 Add Auto-Forward Window

How to use the ADD AUTO FORWARD window:

1. Set the auto-forwarding criteria in the SRC CHANNEL field, SOURCE box, MSG TYPE box, and PRECEDENCE box.
2. Specify the routing information in the DESTINATION box.
3. Toggle the ON/OFF checkbox ON to forward messages of the specified criteria.
4. Click OK to add the entry to the Auto-Forward table. (Or click CANCEL to discard it.)
5. An incoming message is *automatically* forwarded to the destinations entered in the DESTINATION box if:

- It matches the values entered in the SRC CHANNEL field, the SOURCE box, the MSG TYPE box, and the PRECEDENCE box.
- The ON/OFF checkbox is ON.

ADD AUTO FORWARD Window Fields

SRC CHANNEL

Channel for the message source. To specify a different channel:

- 1) Click the list box to show a list of other channels.
- 2) Select a channel from the list. To create a broadcast or to forward manually-generated messages, select LOCAL.

Note: The list includes channels that are not active. To determine channel status, use the COMMUNICATIONS option from the COMMS pull-down menu.

ON/OFF Checkbox

ON—messages are forwarded based on the criteria for the entry.

OFF—messages are not checked or forwarded based on the criteria for the entry.

SOURCE Box

Either select ALL or specify one or more source criteria. (Note: This option defaults to ALL if no other criteria are selected.)

TO

Forward messages sent to a specified station. Enter the name of the station in the TO field.

FROM

Forward messages sent from a specified station. Enter the station name in the FROM field.

COMMAND

Forward messages sent from a specified command. Enter the command name in the COMMAND field.

SID

Forward messages sent from a specified SID. Enter the SID number in the SID field.

DDN HOST

Forward messages sent from a specified DDN host. Enter the name of the host in the DDN HOST field.

BE3

Forward certain BE3 messages. Enter the first three characters of the BE3 message to auto-forward in the BE3 field.

Note: Create a separate entry (with *different* initial characters) in the auto-forward table for each BE3 message to forward.

ALL

Forward messages from any source.

MSG TYPE Box

Toggle the checkbox ON for each message type to be forwarded.

Note: The BE3 checkbox must be selected for the BE3 diamond knob in the SOURCE box to function.

PRECEDENCE Box

Toggle the checkbox ON for each message precedence level (ROUTINE, PRIORITY, IMMEDIATE, FLASH, CRITIC) to be forwarded.

*DESTINATION Box***CHANNEL**

Channel to send the message. To specify a different channel:

- 1) Click the list box to show a list of other channels, and select a channel from the list.
- 2) For some channels additional information must be entered, such as the name of specific addressees or sites. A box appears below the CHANNEL field to enter this added information.
- 3) For channels requiring destination SIDs (such as OTCIXS and TADIXS), a 3 DIG SIDs box appears below the CHANNEL field. Enter 3-digit Subscriber ID (SID) number(s) to the specific address(es).
- 4) For NETWORK, STU III and EMAIL channels, a scroll list appears below the CHANNEL field with other destination choices. Click the checkboxes for any sites in the scroll list to direct the message(s).

6.9.1.1 Setup Auto Forward Table for a Track Broadcast

Note: When the auto forward table is intended for use with a broadcast, before adding a new broadcast, configure and activate an auto forward entry.

1. Select Auto Forward Table from the COMMS pull-down menu. The MESSAGE AUTO FORWARD window appears.
2. In the MESSAGE AUTO FORWARD window, click ADD. The ADD AUTO FORWARD window appears.
3. In the ADD AUTO FORWARD window, verify that the SRC CHANNEL option is LOCAL and the ON/OFF toggle is yellow (active). Do not change the SRC CHANNEL to ALL.
4. In the SOURCE box, select the TO knob, making the TO: field active (and the diamond knob yellow). In the TO: field, enter the hostname or site name of the broadcast destination (e.g., USACOM or HORNET).
5. In the MSG TYPE BOX, leave all checkboxes in the scroll list toggled on (containing an "X").
6. In the PRECEDENCE box, verify that all of the toggle boxes are selected and active (yellow).
7. In the DESTINATION box, select an outgoing channel for the broadcast by clicking on the small rectangle next to the channel name (in most cases it will be the name of the JMCIS NETWORK channel).

Note: If using a NETWORK channel, a list of hostnames will appear in the DDN HOST field which appears below the channel name in the DESTINATION box.

8. In the DESTINATION box, click the box next to each hostname to which the broadcast will send.
9. Click OK. The auto forward entry will appear in the MESSAGE AUTO FORWARD window with a status of ACTIVE.
10. In the MESSAGE AUTO FORWARD window, click EXIT.
11. You may now add the broadcast.

Note: The TO: line of broadcast header window must exactly match the TO: line of the auto forward entry. Otherwise, the broadcast will not activate.

6.9.1.2 Relay Messages to Another System

1. Select Auto Forward Table from the COMMS pull-down menu. The MESSAGE AUTO FORWARD window appears.
2. In the MESSAGE AUTO FORWARD window, click ADD. The ADD AUTO FORWARD window appears.
3. In the ADD AUTO FORWARD window, select the SRC CHANNEL. In GCCS it will likely be the name of the NETWORK channel. Do not change the SRC CHANNEL to ALL.
4. Determine if messages will be selected by the FROM: or TO: line. Do not select ALL. In the SOURCE box, toggle on the button for the appropriate line, then enter the host or site name. For example, to auto-forward messages from USACOM, toggle on the FROM: line and type in USACOM. This line must exactly match the FROM: line in messages sent by USACOM.
5. In the MSG TYPE box, toggle off all unnecessary message formats, leaving active (selected) only the message format type that you wish to forward.

| |
|--|
| <p>Note: If a broadcast is already sending tracks, forwarding GOLDRPT messages will duplicate the effort and interfere with UID correlation.</p> |
|--|

6. In the DESTINATION box, select the destination channel and hostname for auto-forwarding.
7. Click OK. The entry will appear in the MESSAGE AUTO FORWARD window as ACTIVE. This will automatically relay selected message types to selected hostnames locally or to another site.

6.9.1.3 Pre-select Multiple Destinations from a TO: Line in a Header Window

1. In the Message Auto Forward window, leave the SRC CHANNEL as LOCAL.
2. In the SOURCE box, select the TO knob, making the TO: field active (and the diamond knob yellow). In the TO: field, enter an alias name to represent multiple destinations.
3. In the DESTINATION box, select the destination channel and hostnames to be assigned to this alias. Any or all of the hostnames listed from a Network Channel can be selected.
4. Click OK.

When sending JMCIS data, type the alias name which you assigned to represent multiple destinations into the message header. All destinations selected as part of the alias in the auto forward table will be automatically selected.

6.9.2 MESSAGE AUTO FORWARD POP-UP MENU

In addition to the options described in Summary of Common Operations (ADD, ARCHIVE, DELETE, EDIT, EXIT, PRINT, RESTORE, SELECT ALL, UNSELECT ALL, and XMIT), the MESSAGE AUTO FORWARD pop-up menu also includes:

EXPORT

The EXPORT pop-up option appears shaded in the pop-up menu, which means it cannot be selected. If changes are made in the AUTO-FORWARD option, they are automatically sent to all other workstations on the LAN when EXIT is clicked from the MESSAGE AUTO FORWARD window. (Refer to Appendix A, *EXPORT*, for more details.)

ACTIVATE

ACTIVATE performs the same function as toggling ON the ON/OFF checkbox in the ADD AUTO FORWARD window.

1. Highlight one or more table entries in the MESSAGE AUTO FORWARD window.
2. Select ACTIVATE from the pop-up menu.

When an entry is ON, an incoming message is checked against the criteria to determine whether it should be auto-forwarded.

DE-ACTIVATE

DE-ACTIVATE performs the same function as leaving the ON/OFF checkbox blank in the ADD AUTO FORWARD window.

1. Highlight one or more table entries in the MESSAGE AUTO FORWARD window.
2. Select DE-ACTIVATE from the pop-up menu.

When an entry is OFF, an incoming message is *not* checked against the criteria to determine whether it should be auto-forwarded.

6.10 DDN (DEFENSE DATA NETWORK) HOST TABLE

The DDN HOST TABLE option is used only for ashore sites to view a list of host names and their relationship to the ashore site.

- Host names are used to communicate between the different sites when using a network-type communications channel.
- The DDN HOST TABLE option cannot be edited by end-users. The System Administrator has edit capability. The *UB System Administrator's Guide* contains more details about maintaining host tables.

To access this window: COMMS pull-down menu : DDN HOST TABLE option : NET HOSTNAME TABLE window (Figure 6.10-1).

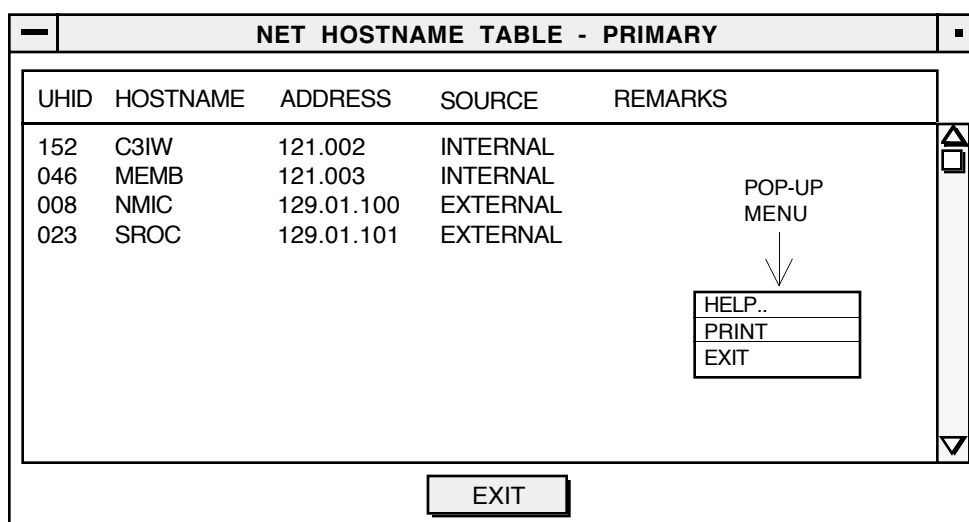


Figure 6.10 -1 Hostname Table Window with Pop-up Menu

The NET HOSTNAME TABLE window lists all host names for either the primary or alternate host table. The title bar shows either PRIMARY or ALTERNATE to identify which list is being viewed.

NET HOSTNAME TABLE Window Fields

UHID

Unique host name ID—a three-character code that *uniquely* identifies the host.

HOSTNAME

The *full* name of the host; each host must be unique.

ADDRESS

Numerical address of the host machine.

SOURCE

INTERNAL—host name is internal to a site.

EXTERNAL—host name is external to a site.

REMARKS

Remarks about the host name.

NET HOSTNAME TABLE Pop-Up Menu

Options available on the NET HOSTNAME TABLE pop-up menu (HELP, PRINT, and EXIT) perform as described in *Summary of Common Operations*.

6.11 STU III DIRECTORY

A STU III is a device to encrypt and send classified data over phone lines. This data cannot be unencrypted without the proper key, which is held within the organization receiving the message.

Use the STU III DIRECTORY option to view a list of organizations that are set up to receive messages sent with a STU III.

To access this window: COMMS pull-down menu : STU III DIRECTORY option : STU III DIRECTORY window (Figure6.11-1).

| MAN ID | PHONE NUMBER | NAME | INTRVL | DAO CODE | KEYSET ID |
|--------|--------------|------|--------|----------|-----------|
|--------|--------------|------|--------|----------|-----------|

Figure6.11 -1 STU III Directory Window

STU III DIRECTORY Window Buttons

ADD—a STU III entry.

1. Click ADD to open the ADD STU ENTRY window.
2. Enter values in the fields. Described in *STU III DIRECTORY Window Fields*.
3. Click OK to add the entry, or CANCEL to discard it.

EDIT—a STU III entry.

1. Select the STU entry.
2. Click EDIT to open the EDIT STU ENTRY window.
3. Make changes. Options to edit an entry are the same as those to add.
4. Click OK to save any changes, or click CANCEL to discard them.

DELETE—a STU entry.

1. Select one or more entries from the STU III DIRECTORY window.
2. Click DELETE. The entries are removed from the system.

OK— save the changes and close the window.

CANCEL—discard the changes and close the window.

STU III DIRECTORY Window Fields**ACL HEADER**

This field is reserved for system administration use. Information contained in the list of organizations can be entered and maintained only by the System Administrator.

The following fields are listed for each organization:

MAN

This field is marked with an “x” if the destination uses a *manual* STU.

ID

Three-character ID for the organization.

PHONE NUMBER

Phone number for the organization.

Note: If there is an extension for the STU III, commas may be used to create a pause between the phone number and the extension. The more commas, the longer the pause.

NAME

Organization name.

INTRVL

Amount of waiting time between attempts to connect to the site.

DAO CODE

Department Agency Organization (DAO) code for the receiving organization.

KEYSET ID

Code identifier for the key of the receiving organization.

6.12 DECODER STATUS

Use the DECODER STATUS option to verify messages are being decoded and to view errors that occur due to faulty messages.

- The window shows one-line descriptions for messages that are sent to the decoder, such as "OTH-GOLD REPORT" or "RAINFORM REPORT."
- The message also shows errors in the data entering the decoder, such as "INPUT REPORT DISCARDED - POS/LOB ERROR."
- These messages cannot be edited.

To access this window: COMMS pull-down menu : DECODER STATUS option : DECODER STATUS window (Figure6.12-1).

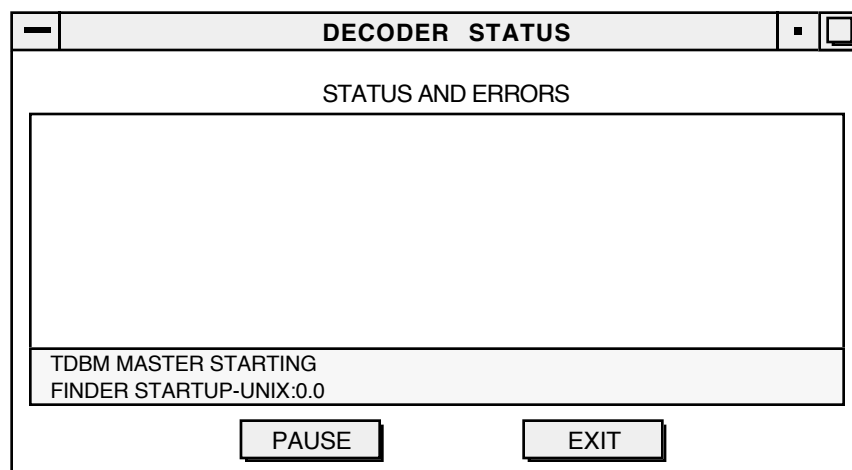


Figure6.12 -1 Decoder Status Window

When opened, descriptions for the last 1000 messages received by the system automatically scroll through this window. The most recently received message

description is listed at the bottom of the window as older messages scroll up and out of view.

How to use the DECODER STATUS Window

1. Click PAUSE to temporarily stop new messages from being displayed.
 - Use the scroll bar to scroll back and view older messages that are no longer shown in the visible portion of the window.
 - When PAUSE is clicked, the name of the button changes to CONTINUE.
2. Click CONTINUE to view new messages again.
3. Repeat steps 1–2 to view messages.
4. Click EXIT to exit from the DECODER STATUS option.

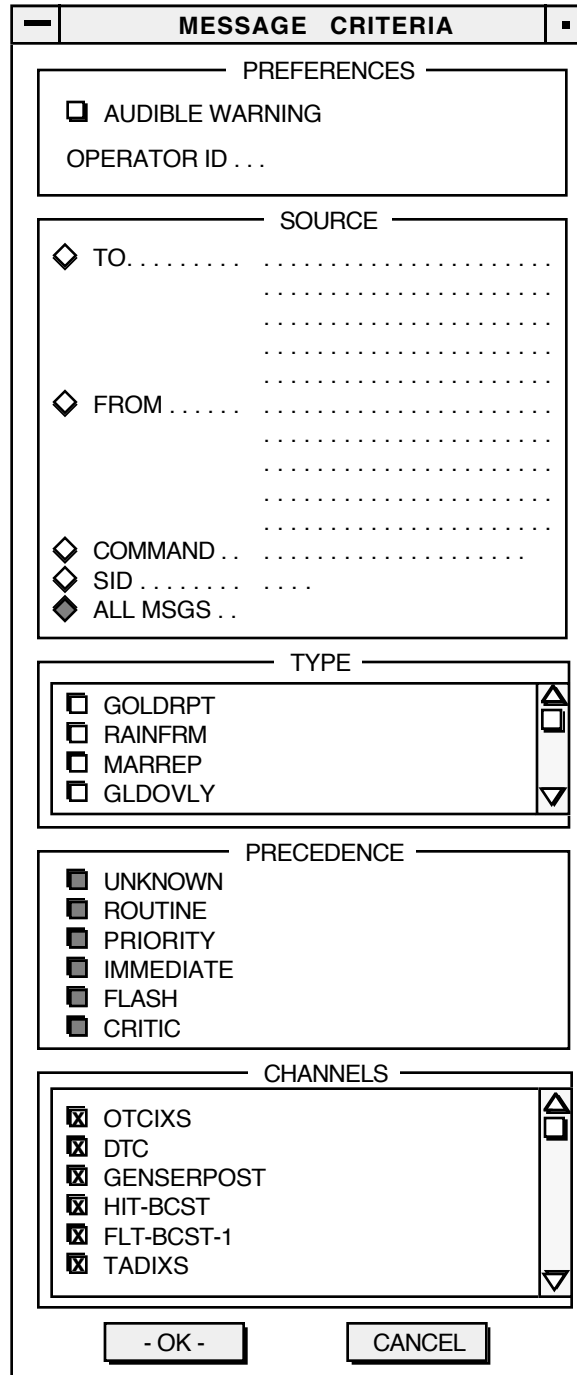
6.13 MESSAGE ALERTS

The MESSAGE ALERTS option sets the criteria that generates an incoming message alert.

When a message matching the criteria enters the incoming message log(s):

- Either a MSG ALERT icon or a MSG line appears on the tactical display.
- If an audible warning was specified, a series of 5 beeps also sounds when the MSG ALERT icon appears.

To access this window: COMMS pull-down menu : MESSAGE ALERTS option : MESSAGE CRITERIA window (Figure 6.13 -1).



The MESSAGE CRITERIA window is a dialog box with a title bar containing a minus sign, the text "MESSAGE CRITERIA", and a square icon. It contains five main sections: "PREFERENCES", "SOURCE", "TYPE", "PRECEDENCE", and "CHANNELS".

- PREFERENCES:** Contains a checkbox for "AUDIBLE WARNING" and a text field for "OPERATOR ID ...".
- SOURCE:** Contains four diamond-shaped selection buttons: "TO.....", "FROM.....", "COMMAND ..", "SID", and "ALL MSGS ..". Each button is followed by a dotted line for text entry.
- TYPE:** Contains a list box with four items: "GOLDRPT", "RAINFIRM", "MARREP", and "GLDOVLY". There are up and down arrow buttons on the right side of the list box.
- PRECEDENCE:** Contains a list box with six items: "UNKNOWN", "ROUTINE", "PRIORITY", "IMMEDIATE", "FLASH", and "CRITIC".
- CHANNELS:** Contains a list box with six items: "OTCIXS", "DTC", "GENSERPOST", "HIT-BCST", "FLT-BCST-1", and "TADIXS". There are up and down arrow buttons on the right side of the list box.

At the bottom of the window are two buttons: "- OK -" and "CANCEL".

Figure 6.13 -1 Message Criteria Window

How to use the MESSAGE CRITERIA window:

1. Indicate whether an audible alert should sound when an incoming message meets the specified criteria.
2. Provide an operator ID to attach to a message after it is read.

3. Specify the alert criteria in the PREFERENCES box, SOURCE box, TYPE box, PRECEDENCE box, and CHANNELS box.
 - Typically, the checkboxes for incoming opnotes and FOTC SITREP messages are selected, as these messages are usually of particular interest.
 - An incoming message must meet *all* specified criteria in the window for UB to inform the user of its receipt.
 - For example, to be alerted about the receipt of a CRITIC message, the CRITIC checkbox must be selected in the TYPE box *and* the CRITIC checkbox in the PRECEDENCE box *and* the SERIAL checkbox in the CHANNELS box.
4. Click OK to add the alert. (Or click CANCEL to discard it.)
5. An alert is *automatically* generated for each incoming message meeting the specified criteria.

MESSAGE CRITERIA Window Fields

PREFERENCES Box

AUDIBLE WARNING

Toggle ON and five beeps will sound when an alert is generated.

OPERATOR ID

Operator identification code to mark on messages. This identifies the person who viewed them.

SOURCE Box

Select ALL MSGS *or* specify one or more source criteria.

For example, TO and FROM criteria may be specified without indicating any other criteria in this box.

TO

Incoming messages that contain specific TO line entries in the raw message. Enter 1–5 names of interest in the TO fields.

FROM

Incoming messages sent from specific locations. Enter 1–5 locations of interest in the FROM fields.

COMMAND

Incoming messages sent from a specific command. Enter the command name in the COMMAND field.

SID

Incoming messages sent from a specific SID. Enter the SID number in the SID field.

ALL MSGS

All messages entering the incoming message log(s).

TYPE Box

Toggle checkboxes ON for each message type that should generate an alert.

PRECEDENCE Box

Toggle checkboxes ON for each message precedence level (UNKNOWN, ROUTINE, PRIORITY, IMMEDIATE, FLASH, CRITIC) that should generate an alert.

CHANNELS Box

Toggle checkboxes ON for each incoming channel that should generate an alert.

6.13.1 VIEW ALERT-GENERATING MESSAGES

When a message matching the criteria enters the system-provided incoming message log:

- A MSG ALERT icon (looks like a mailbox) appears on the tactical display.
- If an audible warning was specified, a series of 5 beeps also sounds when the MSG ALERT icon appears.

Double-click the MSG ALERT icon to open the MSG ALERT window (Figure 6-13-2).

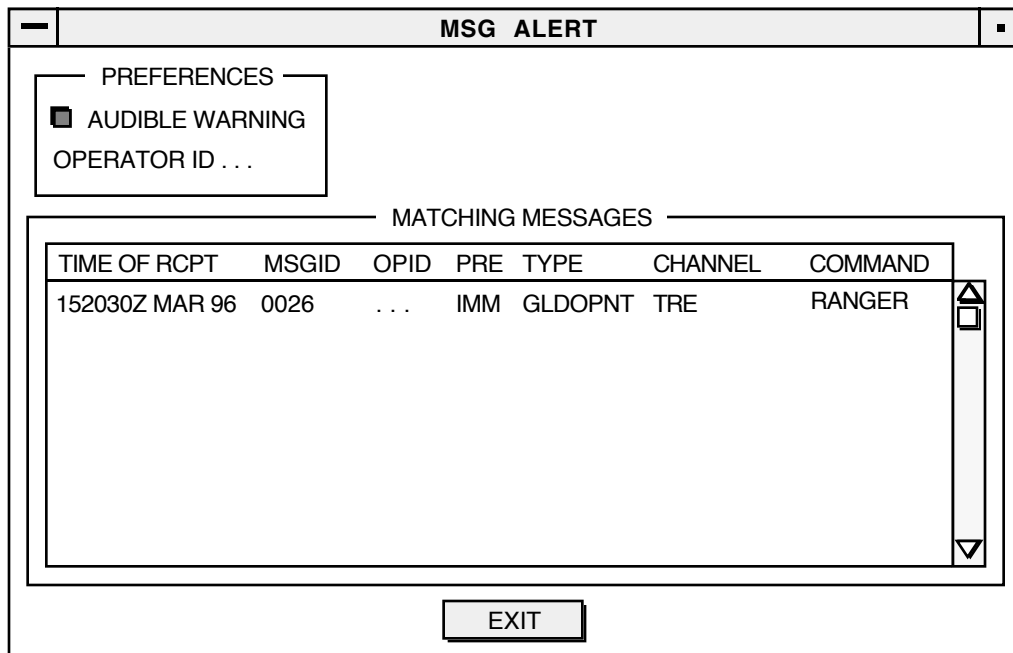


Figure 6-13-2 Msg Alert Window

The MSG ALERT window lists the incoming messages that pass the criteria set in the MESSAGE CRITERIA window.

- Messages are shown in time-of-receipt order.
- All unread messages are listed first and appear in yellow.
- All messages that have been read appear in light blue.

How to use the MSG ALERT window:

Steps 1—4 are optional, and may be performed independently.

1. Before reading messages, change the OPERATOR ID.
2. To view message raw data, double-click on the message to open the MESSAGE window. Described in *View Raw Data*.
3. To change the “read” status of a message, use one of these methods:
 - MARK READ or MARK UNREAD button in the MESSAGE window. Described in *View Raw Data*.
 - MARK AS READ or MARK AS UNREAD pop-up menu option.
 - The scroll list entry changes to light blue (read) or yellow (unread) when the status is changed.
4. To remove messages from the scroll list (they remain in the system), use the DELETE pop-up menu option.

- Redisplay messages in the scroll list with the UNDELETE pop-up option.
 - Warning: If UNDELETE is selected, up to the last 1000 deleted messages are redisplayed.
5. Click EXIT to close the window.
 6. The MSG ALERT icon remains on the tactical display unless all listed messages were deleted or were marked as read.

MSG ALERT Window Pop-up Menu Options

Pop-up menu options (described in *MSG ALERT Pop-up Menu*): DELETE, EXIT, MARK AS READ, MARK AS UNREAD, PRINT MSG, SELECT ALL, SELECT READ, SELECT UNREAD, UNDELETE, UNSELECT ALL, and XMIT MESSAGE.

MSG ALERT Window Fields

PREFERENCES Box

AUDIBLE WARNING

Shows the previously entered setting. Toggle the checkbox ON to receive 5 beeps when an incoming message matches the alert criteria.

OPERATOR ID

Shows the previously entered operator identification code. The ID is used to “mark” messages that have been viewed in the raw data MESSAGE window. The ID field can be edited, when necessary.

MATCHING MESSAGES Box

The following fields are shown for each alert:

TIME OF RCPT

Date-time group when the message was received.

MSGID

Message Identification number, referred to as the GOLD number. For every incoming message, the local system assigns a unique sequential number, often used as a reference for individual messages.

OPID

For messages that have been viewed, displays the operator ID. For messages that have not been viewed, displays dots.

PRE

Precedence level of the message. CRT appears in the PRE field for CRITIC message entries.

TYPE

Message type.

CHANNEL

Receiving channel for the message.

COMMAND

Command where the message originated.

6.13.1.1 View Raw Data

View the raw data for a message that meets the alert criteria. Double-click on the message in the MSG ALERT scroll list to open the MESSAGE window (Figure 6.13 -3).

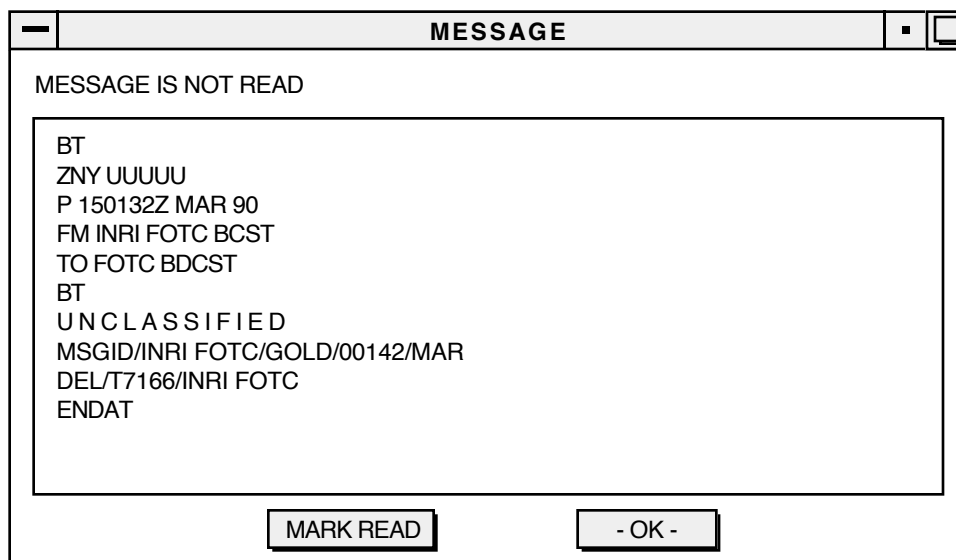


Figure 6.13 -3 Message Window

How to use the MESSAGE window:

1. View the raw data for the selected message in the MESSAGE window.
2. A MARK READ button appears in the window if the message has not been read. To change the status of the message:
 - a. Click MARK READ.
 - b. The OPERATOR ID is attached to the message.
 - c. The message will appear in light blue in the MSG ALERT window.
3. If the message *has been* marked as read, a MARK UNREAD button appears instead. To change the status of the message:
 - a. Click MARK UNREAD to mark a read message as unread.

- b. The OPERATOR ID is removed from the message.
- c. The message will appear in yellow in the MSG ALERT window.
- 4. Close the MESSAGE window and return to the MSG ALERT window.
 - Clicking MARK READ or MARK UNREAD closes the window.
 - Without changing the “mark as” status, click OK to close the window.

6.13.1.2 MSG ALERT Pop-Up Menu

In addition to the options described in *Summary of Common Operations* (DELETE, EXIT, MARK AS READ, MARK AS UNREAD, PRINT MSG, SELECT ALL, UNSELECT ALL, XMIT MESSAGE), or that function as buttons with the same names, the MSG ALERT pop-up menu also includes:

UNDELETE

Redisplay messages deleted from the MATCHING MESSAGES scroll list in the MSG ALERT window. (Messages are not deleted from the system, only the scroll list.)

Warning: If UNDELETE is selected, up to the last 1000 deleted messages are redisplayed.

SELECT READ

Use to select all the messages *that have been read* from the MATCHING MESSAGES scroll list in the MSG ALERT window.

SELECT UNREAD

Select *all the unread messages* from the MATCHING MESSAGES scroll list in the MSG ALERT window.

6.14 DDN NET PING

The DDN (Defense Data Network) NET PING option is used only for ashore sites, to verify communication status with selected host names.

To access this window: COMMS pull-down menu : DDN NET PING option : DDN STATUS window (Figure 6-14 -1).

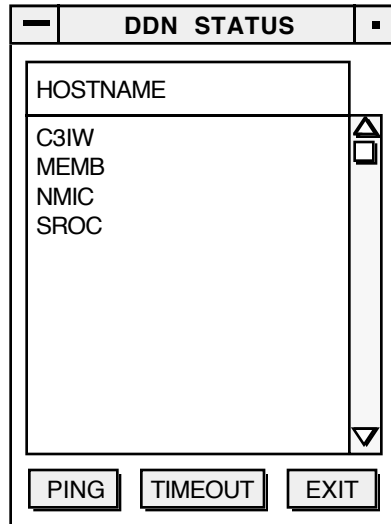


Figure 6-14 -1 DDN Status Window

The DDN STATUS window lists all responding host names in the system.

How to use the DDN STATUS window:

To check the communications status between your site and others:

1. Click TIMEOUT to open the TIMEOUT window and set a value to discontinue pinging if there is no answer within this time period.
 - a. Enter the number of seconds to wait until discontinuing the ping.
 - b. Click OK to accept the entry, or click CANCEL to discard it.
2. Select one or more HOSTNAMEs from the scroll list.
3. Click PING. The HOST STATUS window opens (Figure 6-14-2) and shows the communications status between your site and the selected host names.

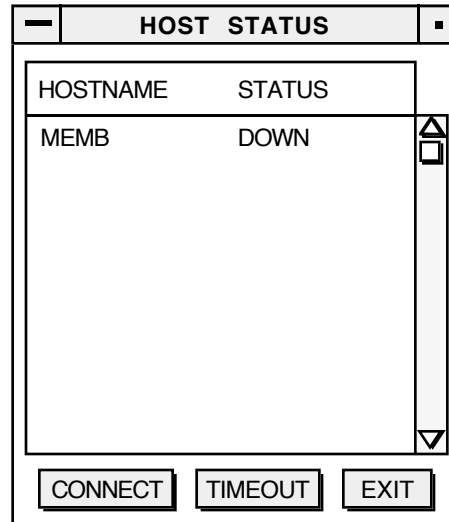


Figure 6.14 -2 Host Status Window

HOST STATUS Window Buttons

CONNECT—operates the same as the PING button from the DDN STATUS window, to ping selected host names.

TIMEOUT—operates the same as the TIMEOUT button from the DDN STATUS window, to set a timeout value to use when pinging selected host names.

EXIT—close the window and return to the DDN STATUS window.

HOST STATUS Window Fields

HOSTNAME

Name of the host.

STATUS

UP—communicate with the selected host name.

DOWN—communication lines are not open for the selected host name.

TIMEOUT—communications could not be established for the selected host name within the time period set with the TIMEOUT button.

6.15 COMMUNICATIONS

Use the COMMUNICATIONS option to configure various communications channels to send and receive messages between systems. This option also controls the following communications processes:

- View all communications (comms) channels and their status (ON/OFF).
- Configure each channel to execute automatically upon system start-up.
- Allows the operator to start or stop configured channels during system operation.
- Add new channels; edit or delete existing channels.
 - Each channel must use one of the system-provided interfaces. (Described in *System-provided Communications Interfaces*.)
 - A maximum of 32 channels may exist concurrently.
 - Attempting to add a 33rd channel produces a warning window.
- Store and retrieve default channel settings.
 - Installation-time settings for comms interfaces can be reinstated using the MASTER DEFAULT pop-up option.
 - Default settings for each interface are described in *Default Settings for Interfaces*.
- Generate a printed report for all communications interfaces in the system.

Comms processes and Server Switchover: If the system experiences a failure, TDBM/Comms processes transfer automatically to the designated backup node, via the Server Switchover function. However, the operator must perform the following steps manually:

1. Acknowledge the TDBM alert that is generated. (For example, "CONNECTING TO MASTER TDBM ON JOTS2; WAITING FOR MASTER TDBM.").
2. Identify active comms channels via the COMMS pull-down menu, COMMUNICATIONS option, channel STATUS column.
3. EDIT the channels by changing the MACHINE field name to the backup server node.
4. RESTART the channels as necessary.

(See the *Unified Build System Administrator's Guide* for details on the Server Switchover function.)

To access this window: COMMS pull-down menu : COMMUNICATIONS option : COMMUNICATIONS window (Figure 6.15 -1).

| COMMUNICATIONS | | | | | | | |
|----------------|-----|-----|-----------|---------|--------|---------|--------|
| NAME | XRF | INT | INTERFACE | MACHINE | DEVICE | STARTUP | STATUS |
| OTCIXS | OTC | INT | OTCIXS | JOTS1 | TTYB | AUTO | ON |
| LINK11-IH | LIH | INT | LINK11IH | JOTS1 | TTYA | AUTO | OFF |
| LINK11-EDO | LED | INT | LINK11EDO | JOTS1 | TTYA | MANUAL | OFF |
| OTCIXS-TTY | OTY | INT | OTCIXSTTY | JOTS1 | TTYC1 | AUTO | OFF |
| DTC | DTC | INT | SERIAL | JOTS1 | TTYC2 | MANUAL | OFF |
| GENSERPOST | GPT | INT | SERIAL | JOTS1 | TTYC3 | AUTO | ON |
| NAV-SINS | NAV | INT | SINS | JOTS1 | TTYC4 | AUTO | OFF |
| NAV-SRN25P | NAV | INT | SRN25PASS | JOTS1 | TTYC4 | MANUAL | OFF |
| NAV-SRN25A | NAV | INT | SRN25ACTV | JOTS1 | TTYC4 | MANUAL | ON |
| NAV-CVNS | NAV | INT | CVNS | JOTS1 | TTYC4 | MANUAL | OFF |

ADD EDIT DELETE EXIT

Figure 6.15 -1 Communications Window with Pop-up Menu

COMMUNICATIONS Window Buttons

ADD—a channel. Described in *Add a Channel*.

EDIT—a channel. Described in *Edit a Channel*.

DELETE—a channel from the COMMUNICATIONS window.

1. Select one or more channels from the COMMUNICATIONS window.
2. Click DELETE. The channels are removed from the window. (Note: The operator is not prompted to confirm the deletes.)
 - Operator-created channels are deleted from the system.
 - System-provided channels may be retrieved using the MASTER DEFAULT pop-up menu option. However, using this option deletes all operator-created channels.

EXIT—the option and close the window.

COMMUNICATIONS Window Pop-up Menu Options

Pop-up menu options (described in *COMMUNICATIONS Pop-up Menu*): ADD, EDIT, EXIT, DELETE, DEFAULTS, HELP, MASTER DEFAULT, PRINT, RESTART, SELECT ALL, START, STOP, UNSELECT ALL, and WINDOW .

6.15.1 SYSTEM-PROVIDED COMMUNICATIONS INTERFACES

Incoming data transmissions go through other hardware sources before entering the workstation. Each piece of hardware must be physically connected to the UB workstation.

For each hardware component that interfaces with the system, a like interface must exist to recognize the data received from that connection and properly decode it for system usage.

2WAY LINK11

Two-way Link-11 sends and receives data directly to the NTDS system, rather than going through an intermediate processor such as an EDO box.

ACDS

Advanced Combat Direction System (ACDS) provides track data from the UYK-43 computer. This interface runs concurrently in the background and uses Link-11 Type A or Type B inputs.

ACDS-CG

ACDS-CG provides track data from the NTDS computer onboard a Cruiser (CG) using Link-11 Type E inputs.

API

The Angle Position Indicator (API) interface is used by the U.S. Coast Guard to obtain speed and heading information for Ownship. This data is requested by the system every ten seconds and is used to compute Ownship's Dead Reckoned (DR) position. In addition:

- API is a NAV interface. (JMCIS allows only one NAV interface to be running at any given time.)
- Provides special interaction of user changes to the NAV input update rate, changes to run-time status of system configured communications channels, and for requests for Ownship's most current DR position by other interfaces such as SPA-25G and RAYCAS V.
- Updates Ownship's position to the track database *only* if no NAV interfaces are currently running.

BIN-KERMIT

The BIN-KERMIT interface allows binary files to be sent using the KERMIT process launched with the binary option.

BDatX (Binary Data Exchange) interface is a specific instance of the BIN KERMIT interface and was the prototype for sending Electronic Warfare Reprogrammable Libraries (EWRL) from shore to a ship.

CVNS

The Carrier Vehicle Navigation System (CVNS) interface provides GPS navigational data. The decoded data contains time of event, latitude, longitude, heading, and velocity information.

- Data is received passively in blocks of lines.
- Each line within the block contains different data that must be accumulated to provide a complete update.
- The blocks of lines are separated in two types of sets—a master set and a slave set—designated by the letter “M” or “S” as the 41st character in the GMT, or time of event line.
- The system decodes *only* the master set; however, all lines of a set must be received to be accepted as update for Ownship's position.

DIRECT

The DIRECT interface (one-way transmit) sends OTH-GOLD messages from the JMCIS Secret Compartmented Information (SCI) system to the GENSER system. Messages are sent directly from GenBcst, rather than going through OCM.

E-MAIL

The E-MAIL interface allows JMCIS to send and receive messages through the E-mail pathway.

- Messages received by E-mail are stripped of the E-mail wrapper and processed as regular formatted messages from formatted message comms sources.
- Currently, the receive side is limited to process-only messages addressed to the "jmcis" user on a given host.
- Normal JMCIS OTH-T GOLD messages are injected into the UNIX mail system with the mail header prepended.
- There are no default settings for EMAIL.

GFCP

The GFCP terminal interface provides status data and control options network-wide for the GFCP. This data includes:

- number of messages in the message queues
- run-time status
- configuration control

GPS

The Global Positioning System (GPS) with NMEA 0183 interface, provides an afloat unit with accurate satellite navigation information.

- Decoded data contains time of event, latitude, longitude, heading, and velocity.
- Data is processed by the system as an update to the track designated as Ownship, so that its currently displayed position is accurately maintained.

JMIE

The JMIE interface provides access to the Joint Maritime Intelligence Element (JMIE) database, which supports database queries from UB to the JMIE system. Track data sent to UB as a result of the queries is submitted to the UB track database.

JMIE queries are formatted into OTH-T GOLD opnote messages, then submitted for transmission via the UNIX mail program. The reply is processed and the results are returned as an OTH-T GOLD report.

KERMITCOMMS

The KERMITCOMMS interface allows the receipt and transmission of files using standard kermi protocol. The Air Tasking Order Exchange (ATOX) interface is a specific instance of KERMIT COMMS.

LATERAL TELL (LATTEL)

LATTEL is an Air Force interface composed of link speed data from ground-based radars. The interface is synchronous serial; therefore, it requires special hardware to be received by asynchronous serial ports.

- Lateral Tell messages are binary messages that contain an identifiable header string of bits.
- Once these bits are received, subsequent bits are decoded and translated into track data.

- The bits that follow each message indicate the interface is idle, and that no message traffic is flowing.

LINK11EDO

The receive only LINK11EDO interface allows the system to receive real-time track information from Link-11 via an EDO TDP II, or an Indian Head Passive Tap (IPT).

- Parallel data is translated to serial by the EDO box and/or the Indian Head box.
- No header or footer data is added.
- The system can monitor multiple Link-11 broadcasts simultaneously.

LINK14

The receive only Link-14 interface obtains NTDS data in Link-14 format. When Link-11 is unavailable, this interface receives timely track position data from a remote link, with data that complements the local track picture, but is not part of the local Link-11. The system can monitor multiple Link-14 broadcasts simultaneously.

- Data from a Link-11 system is rebroadcast as Link-14, via radio, to give non-NTDS platforms and ships a reasonably current tactical picture.
- Data is in U.S. Link-14 format, according to OPSPEC 414, with no special protocols or header and trailer requirements.
- Received data is decoded line-by-line at the time of reading from the buffer, then forwarded in link track messages to the Tdbm process.

LK11IHADS

The receive only LK11IHADS (Link-11 Indian-Head ADSI) interface allows the system to receive real-time ADSI link track information, using the Indian-Head protocol. As track information from this interface is processed, the system uses a stereographic projection to plot the tracks on the geographic display.

LORAN-C

The Long Range Aid to Navigation (LORAN) interface provides an afloat unit with accurate GPS satellite navigation information. This interface should be used for a channel that is connected to a standard LORAN C receiver to provide latitude and longitude coordinates for Ownship. (Only one Ownship NAV type interface may be run at a time.)

- Data is received passively, once per second.

- Decoded data contains time of event, latitude, longitude, heading, and velocity.
- Calculated speed is based on differences in distance and time between events.

MDT

The Mean Down Time (MDT) interface provides a front-end to AUTODIN. MDT can connect directly to AUTODIN, or indirectly to AUTODIN via an LDMX. The MDT interface uses XON/XOFF for flow control.

MDT requires a JANAP-like header on the messages being sent to MDX. The header is constructed by the interface increments the Channel Sequence Number (CSN) information and placed into the Format Line 1 of the message(s) being sent.

MDX

The Message Data Exchange (MDX) interface provides a point-to-point communications channel designed to transmit track data from one site to another.

NAVIN

NAVIN is the incoming serial interface to the NAVMACS V5. NAVIN executes a special form of hardware handshaking to receive messages from the NAVMACS V5.

NAVOUT

NAVOUT is the outgoing serial interface to the NAVMACS V5. NAVOUT executes a special form of hardware handshaking to send messages to the NAVMACS V5.

NETPREC

This interface is used to create a new type of network comms channel. The NETPREC channel uses a precedence queue when transmitting messages—the system assigns the highest priority to the highest precedence message in the queue. This differs from channels created using the NETWORK interface, which uses a First-In-First-Out queue.

The system automatically designates TTYD6 for a NETPREC channel and TTYD7 for a NETWORK channel. If either of these devices are turned on to another comms channel (via the DEVICE field in the COMMUNICATIONS window), a warning appears with “Device And Host Are Already Active.”

OTCIXS and TADIXS

Officer in Tactical Command Information Exchange Subsystem (OTCIXS) and Tactical Data Information Exchange Subsystem (TADIXS) interfaces provide links to worldwide communications.

- Message traffic on these channels vary with the application, providing “many-to-many” connection with access to the OTCIXS and TADIXS networks.
- Access gives essential command and control capability to broadcast track data to fleet users (i.e., ashore sites and afloat units such as FOTC).
- Facilitates opnote exchange access with other JMCIS and non-JMCIS units worldwide.

OTCIXS16

OTCIXS16 interface provides a link to worldwide communications, allowing 16 bit SID assignments rather than the 8 bit SIDs allowed in the OTCIXS/TADIXS

- A 16 bit SID allows up to 65536 addressees
- The 8 bit SID allows only 256 addressees.
- Data is passed in accordance with the OTH-T GOLD format.

OTCIXSTTY and TADIXSTTY

This interface provides a *read-only* view of the TTY port for OTCIXS and TADIXS-A. OTCIXSTTY/TADIXSTTY are connected via a serial RS-232 line to provide transfer of ASCII data messages. Data passed via this interface is in accordance with the OTH-T GOLD format.

RAYCAS V

The RAYCAS V interface is used to connect a channel to a Raytheon RAYCAS V radar indicator. Other specifics include:

- Automatic Radar Plotting Aids (ARPA) to assist radar navigation, collision avoidance, and piloting operations.
- Targets detected by the SPS-64 radar are automatically acquired and tracked.
- Organic track data received passively via a serial RS-232 line.
- Provides about 30 targets. Data received contains the time of event, local track number, range and bearing from Ownship, speed, course, closest point of approach (CPA), and time of CPA. UB uses all of this data *except* the CPA and TCPA.

- RAYCAS V data is transmitted periodically from a serial printer port.
 - The periodic rate of transmission is selectable at the RAYCAS V with a minimum rate of once per minute.
 - If the rate is too fast for the amount of data that needs to be transmitted, the report is truncated when the cycle time occurs and the rest of the updates will be lost.
- RAYCAS V tracks are decoded into the link track structure.
 - Local track number is entered into the NTDS track number field.
 - No automatic correlation of these tracks to tracks from any sources other than the same RAYCAS V interface.

RF-NET

This interface provides message exchange (transmission and receipt) between various UB sites in the network. Communications occur through a controlled RF-NET to standard radio communications suites, with limited operator intervention.

- The RF-NET interface is set up like a link network, in that one system is the controller and the rest are subscribers. Each system follows a protocol for message exchange.
- RF-NET is not a point-to-point communications mechanism. Transmitted messages are received by the controller and all participating subscribers; however, not every message is processed by each station.
- A time-sequencing method is used, similar to a Secure Telephone Unit when broadcasting data to other sites.
- RF-NET is capable of operating in a variety of radio frequencies, including HF, UHF, and UHF Satellite.
- RF-NET supports the exchange of special types of C⁴I information, such as Electronic Intercepts, Mine Warfare, ASW or other discrete data set types for specific mission areas, thereby leaving OTCIXS free for general and urgent C⁴I data exchange.

SERIAL

SERIAL is used for a variety of serial connections, where the only difference is the criteria for message bounding. It is generically configured for:

- Start of Message (SOM)
- End of Message (EOM)
- Cancellation of Message (COM)
- Line criteria

SERIAL is currently used for the TacIntel interface, NAVMACS V5 Printer, and News (AP/UPI). It can also be used in place of Duplex with its DEFAULT message bounding criteria.

SINS

The Ships Inertial Navigation System (SINS) interface provides an afloat unit with accurate GPS satellite navigation information. Decoded data contains time of event, latitude, longitude, heading, and velocity.

- Data is received passively—different types of lines that are received contain different data.
- Each line type is defined by the first character of the line.
- The system decodes only those lines beginning with the letter “I.”
- Data that is decoded from a line contains the time-of-event, latitude, longitude, heading, and speed.

SPA25G

The Sosus Probability Area—SPA25G interface—should be used for a channel that is connected to a SPA25G indicator.

The SPA25G indicator:

- Interfaces to standard surface and air search radars, and to ship’s sonar—if so equipped.
- Provides semi-automated target acquisition and tracking aids. (NTDS-type target track reports are available through RS-422/423 and MIL-STD-1553 ports.)
- Receives organic track data passively via a serial RS-232 line.
 - JMCIS provides the capability for input—up to four SPA25Gs at any one time.
 - There are less than 100 tracks per SPA25G.
 - Data received contains the local track number of the unit, system track number, true heading, magnetic heading, speed, time of plot (or event), and symbol type.

SRN-19

The Surface Radio Navigation—SRN-19—interface provides an afloat unit with accurate GPS satellite navigation information. Data is processed by the system as an update to the track designated as Ownship, so that the Ownship's currently

displayed position shall be accurately maintained. Note: Only one Ownship NAV type interface may be run at a time.

SRN25ACT and SRN25PASS

The SRN25 Active and SRN25 Passive interfaces provide afloat units with accurate satellite navigation information. Data is processed by the system as an update to the track designated as Ownship, so that Ownship's current position is accurately maintained. Note: Only one Ownship NAV type interface may be run at a time.

STU III

Secure Telephone Unit—STU III provides a means to communicate classified information between sites over normal telephone lines.

Specific STU III connections are described in the *Unified Build System Administrator's Guide*.

TAMPS

The Tactical Aircraft Mission Planning System (TAMPS) interface should be used for a channel that is connected to the TAMPS system.

TAMPS receives requests from the TAMPS system, then:

- Converts these requests into sybased queries to the NIPS system
- Receives answers back from NIPS
- Packages these answers
- Transmits them back to TAMPS

Data sent to TAMPS is line-oriented, but will not conform to an official formatted message specification.

TDP8648 (TDP864816)

TDP8648 and TDP864816 interfaces are used for test purposes to emulate the ON-143(V)6 with 8 bit and 16 bit SIDs, respectively. The OTCIXS and OTCIXS16 interfaces interact with the (V)6 using the 8648 protocol. These interfaces implement the (V)6 side of the interface.

TIMSOUT

The Tactical Information Management Service (TIMSOUT) interface provides information for the TIMS system for its display and manipulation.

- Data is generated by a broadcast that includes complete management messages, as well as track reports.
- The primary set of messages includes track data.
- TIMSOUT provides other systems with point-to-point communications.
- Data passed across this interface are ASCII data messages that have been encoded in accordance to the GOLD REV B message specification. Note: TIMSOUT is a transmit only interface.

TRE

The TRE (Tactical Readiness Evaluation) system can be configured to send data as TABULAR or OTH.

- If configured for OTH, then a normal comms circuit that can handle processing of the OTH-GOLD messages is used to receive the TRE input.
- If TRE is configured for TABULAR, then the special TRETABULAR interface is used to interpret the data correctly.

Details of this interface are classified.

TTY (Circuit)

This interface provides the ability to monitor a teletype channel for data being sent to it—that is, any broadcast not being read by another interface.

VT100TERM

The VT100 terminal emulation process is used primarily to configure the GFCP, allowing configuration from a JMCIS-display window.

Various operational parameters (SID assignment, GFCP msg routing, etc.) can be configured through this interface.

WRN6

This interface provides two-way communications with WRN-6 hardware to supply accurate WRN-6 satellite navigation information.

- Decoded data contains time of event, latitude, longitude, and velocity.
- Input data is composed of 32 words, each 16-bits wide, and presented in two's complement.

WSN5

The WSN5 interface provides workstations with accurate satellite navigation information.

- Decoded data contains time of event, latitude, longitude, and velocity.
- Input data is composed of seven words, each 32-bits wide, presented in two's.

6.15.2 ADD A CHANNEL

Select ADD to open the ADD CHANNEL window (Figure 6.15-2).

'. To the right is a 'DISPLAY SETTINGS' section with two radio buttons: 'ALL' (selected) and 'BY INTERFACE'. Below these are two scrollable lists: 'INTERFACE' and 'INITIAL SETTINGS'. Both lists contain the same items: ACDS, ACDS-CG, AMP, API, ATO-KERMIT, BIN-KERMIT, BSY2, CVNS, DIRECT, and EMAIL. At the bottom are two buttons: '- OK -' and 'CANCEL'."/>

Figure 6.15 -2 Add Channel Window

The ADD CHANNEL window contains a list of the communications INTERFACES in the JMCIS system and a scroll list of default channels—INITIAL SETTINGS. Both lists are compiled in alphabetical order.

Each new channel uses one of the system-provided interfaces. The same type of interface can be used by multiple channels.

Select an Interface:

1. Enter a NAME for the channel and a cross-reference code (XREF).
2. Toggle the INTERNAL checkbox ON *unless* this channel is for a DDN broadcast.

3. Select a communications interface.
4. To print a list of the interfaces, use the HARD COPY pop-up option.
5. Click OK to accept the new channel (name and interface), or click CANCEL to discard it.

Select a Channel:

1. Double-click a channel name in the INITIAL SETTINGS scroll list.
2. The corresponding interface is automatically highlighted. The NAME and XREF fields are filled in.
3. Click OK. The system checks for errors and duplicates; if any are found, a warning window appears.

ADD CHANNEL window fields:**NAME**

Unique channel name, up to 10 characters.

XREF

Unique three-character communications cross-reference code.

INTERNAL

This checkbox should always be ON unless running a DDN broadcast. If a DDN broadcast is running, this checkbox should be OFF.

ALL

List all the default channels for all interfaces.

BY INTERFACE

List only those defaults that pertain to the selected interface. Click BY INTERFACE to see an initial setting called DEFAULT; values for default settings are the default values of the interface.

6.15.3 EDIT A CHANNEL

To edit a channel:

1. Select the channel from the list in the COMMUNICATIONS window.
2. Click EDIT. (Or, highlight the channel entry and double-click.)
3. The interface for the selected channel determines which window appears.
 - For most interfaces, the COMMS EDIT window opens. (Described in *COMMS EDIT Window*.)

- Interfaces that require a special window are listed in the chart below and are described separately later in this section.

| Document | Configure these Comms Interfaces: |
|---------------------|--------------------------------------|
| EDIT NTDS Window | 2WAYLINK11, ACDS, LINK16, WSN5, WRN6 |
| EDIT AMP Window | AMP |
| EDIT API Window | API |
| EDIT MDX Window | MDX |
| EDIT NETWORK Window | NETPRC, NETWORK, TIMSOUT |

6.15.3.1 COMMS EDIT Window

For most channels, the COMMS EDIT window appears. The fields in the window vary for different interfaces. All fields are described in this section.

Figure615 -3 shows the COMMS EDIT window with fields for an OTCIXS interface.

COMMS EDIT

CHANNEL

NAME OTCIXS
XREF OTC
INTERFACE OTCIXS
DEVICE TTYA
MACHINE JOTS1

☒ RECV ☐ XON/XOFF
☒ XMIT ☐ RTS/CTS
☒ AUTOSTART

DATA TYPE

☐ BAUDOT
☐ ASCII
☒ BINARY

PARITY

☒ NONE
☐ EVEN
☐ ODD

STOP BITS

☒ 1
☐ 1.5
☐ 2

BAUD RATE

☐ 50
☐ 75
☐ 110
☐ 300
☐ 1200
☐ 2400
☒ 4800
☐ 9600
☐ 19200

SOURCE

INTEL

DATA SIZE

☐ 5
☐ 6
☐ 7
☒ 8

- OK - **CANCEL**

Figure615 -3 Comms Edit Window for OTCIXS Interface

How to use the COMMS EDIT window:

1. When the window first opens, data for the selected channel appears in the fields.
2. Modify the data.
 - Data fields (e.g., NAME): Cannot be edited.
 - List fields (e.g., DEVICE): Click the right trackball button on the name of the device (for example, TTYA) to show a list of available choices. Select a value from the list.
 - Checkboxes (e.g., AUTOSTART): Toggle ON or OFF.
 - Diamond knobs (e.g., BAUDOT): Toggle ON one in each group.
3. Click OK to accept the changes. (Or click CANCEL to discard them.)
4. If the channel is turned on while editing, clicking OK automatically stops the channel and restarts it with the new settings.

COMMS EDIT Window Fields***CHANNEL Box*****NAME**

Unique channel name. This field cannot be edited.

XREF

Unique three-character communications cross-reference code for the channel. This field cannot be edited.

INTERFACE

Communications interface for the channel. This field cannot be edited.

DELIMITERS (SERIAL interface only)

For most interfaces, the system recognizes only standard message types; however, when using GENDUP, the DELIMITERS field allows selection of a delimiters file that contains the criteria to recognize one or more special message types.

1) Click the list box in front of the DELIMITERS field to view and select available delimiter files. The name of the selected file automatically appears in the DELIMITERS field.

2) To view the contents of the current file in the DELIMITERS field, select the VIEW DELIMITERS FILE option from the pop-up menu. A window appears, listing all message set definitions in the selected file.

DEVICE

Device name (tty serial port) used for this channel.

MACHINE

Name of the machine used to transmit or receive messages on this channel.

Note: All of the following checkboxes can be toggled OFF or ON at will; however, that does not always mean any changes affect the actual channel.

Only channels with SERIAL and OTCIXS interfaces are capable of transmitting data. Even if XMIT is check ON for channels with other interfaces, those channels can not transmit. For example, LINK11-IH can ONLY receive data, whether or not the XMIT checkbox is toggled on.

RECV

Sets the channel to receive messages.

XMIT

Sets the channel to send messages.

XON/XOFF (all interfaces except NAVIN and NAVOUT)

XOFF (checkbox is empty)—system stops transmitting data.

XON (checkbox filled)—system resumes data transmission.

Note: If the BAUDOT diamond knob is selected in the DATA TYPE box, the XON/XOFF checkbox is “ghosted” and is unavailable.

RTS/CTS (all interfaces except NAVIN and NAVOUT)

A Request to Send (RTS) message is sent to wake up the receiving workstation before a real message is transmitted. The receiving workstation replies with a Clear to Send (CTS) message to indicate that it is prepared to receive data.

Use this checkbox when there are high baud rates to ensure against data loss.

AUTOSTART

Automatically turn on the channel at JMCIS startup.

CRYPTO PHASE

Appears for some interface types (including SERIAL). This checkbox is available for those systems using the KG-84 encryption device. If this device is used, toggle the checkbox ON to ensure messages are handled properly.

MANUAL DIAL (STUIII interface only)

Toggle this checkbox ON if transmitting from a manual STU III device, or leave this checkbox blank if transmitting from an automatic STU III.

HOST SCREEN (STUIII interface only)

Designates which monitor displays alert messages. Enter the machine name, followed by a colon and the appropriate monitor configuration.

Primary monitor: 0.0

Secondary monitor: 0.1

For example, to designate the secondary monitor on the JOTS3 machine, enter: JOTS3:0.1

SECT MSGS (MDT, NAVIN, NAVOUT, and AMP interfaces only)

A sectionalized message is a message that must be broken into distinct, smaller messages to meet certain size restrictions.

- Sectioned messages are indicated with an "S" in the window; collated messages are indicated with a "C."
- The process breaks the message into sections, with each section containing a maximum of five pages (20 lines per page.)
- Message text pages contain only text. Therefore, if a page contains text and header information, it is not considered a message text page.
- When the SECT MSGS checkbox is clicked, the CID/CSN (CDSN) window automatically appears with default values in the fields.
- When a message "times out," an alert is generated that indicates which sections of the message are missing.

NIPS ACCT (NAVIN and NAVOUT interfaces only)

ON—send accounting messages to the NIPS server. If this checkbox is turned off and later turned on, no information on messages that occurred while accounting was off is sent.

Note: Checkbox must be turned OFF if no NIPS workstation exists on the LAN.

DCD (NAVIN and NAVOUT interfaces only)

DCD (Data Carrier Detect) turns on DCD hardware handshaking and transmits a signal from a peripheral (tape drive, modem, etc.) to the workstation to indicate that the peripheral is properly connected.

DCD hardware handshaking should be used on a Sun-based workstation (DTC-2 or RSC-1X/2/X). Click this checkbox off to turn on Data Set Ready (DSR) hardware handshaking.

DATA TYPE Box

Type of data to transmit or receive over the selected channel—BAUDOT, ASCII, or BINARY.

PARITY Box

Parity of the transmissions over the selected channel—NONE, EVEN, or ODD.

STOP BITS Box

Number of stop bits for transmission—1, 1.5, or 2.

BAUD RATE Box

Baud rate for transmissions over the selected channel.

SOURCE Box

Shows INTEL for all interface types *except* LINK11 and LINK14.

If the interface is LINK11 or LINK14, four diamond knobs appear in this box: LINKA, LINKB, LINKC, and LINKD.

DATA SIZE Box

Number of bits per character for serial communications. ASCII and BINARY data types default to 8, while BAUDOT defaults to 6.

6.15.3.2 EDIT NTDS Window

For channels with an 2WAYLINK11, ACDS, LINK16, WSN5, WRN6, SDMS, or POFA interface, the EDIT NTDS window appears. The fields in the window vary for different interfaces. All fields are described in this section.

Note: The DEFAULT TRACK TYPE box appears for channels using 2WAYLINK11, LINK11PEDO, or LINK11PIH interfaces only.

Figure 6.15 -4 shows a 2WAYLINK11 interface.

Figure 6-15 -4 Edit NTDS Window for 2WAYLINK11 Interface

How to use the EDIT NTDS window:

1. When the window first opens, data for the selected channel appears in the fields.
2. Modify the data.
 - Data fields (for example, NAME): Cannot be edited.
 - List fields (e.g., DEVICE): Click the right trackball button on the name of the device (for example, NTDS0) to show a list of available choices. Select a value from the list.
 - Checkboxes (for example, AUTOSTART): Toggle ON or OFF.
 - Diamond knobs for SOURCE and DEFAULT TRACK TYPE (for example, LINK A): Toggle ON one in the group.
3. Click OK to accept the changes. (Or click CANCEL to discard them.)
4. If the channel is turned on while editing, clicking OK automatically stops the channel and restarts it with the new settings.

EDIT NTDS Window Fields

AUTOSTART

Automatically turn on the channel at JMCIS startup.

UPDATE OWNERSHIP (ACDS interface only)

Receive Ownership updates on this channel.

*NTDS CHANNEL Box***NAME**

Channel name. This field cannot be edited.

INTERFACE

Communications interface for the channel. This field cannot be edited.

DEVICE

Device name (tty serial port) used for this channel.

MACHINE

Name of the machine used to transmit or receive messages on this channel.

SOURCE Box (ACDS, LINK16, POFA, and 2WAYLINK11 interfaces)

The Link source—LINKA, LINKB, LINKC, or LINKD.

DEFAULT TRACK TYPE Box (2WAYLINK11 interface)

Allows the operator to select a default track type for channels using specific Link interfaces.

6.15.3.3 Edit AMP Interface Channel

For channels with the AMP interface, the EDIT AMP window appears (Figure 6.15-5). The AMP interface:

- Is designed to exchange messages between NAVMACS II and JMCIS.
- Can connect to any host with Ethernet connectivity and an AMP server.
- Currently supports only formatted message traffic: JANAP 128, ACP 126M, JOTS, etc.

EDIT AMP

AMP

NAME AMP

XREF AMP

INTERFACE ... AMP

MACHINE JOTS4

SERVER DATA

HOSTNAME .. JOTS1

CLASS UNCLASSIFIED

TOKEN

SRC/SHD ...

☐ USE CDSN ☐ AUTOSTART

☐ SECT MSGS

Figure 6.15 -5 Edit AMP Window

How to use the EDIT AMP window:

1. When the window first opens, data for the selected channel appears in the fields.
2. Modify the data.
 - Data fields: NAME, XREF, and INTERFACE cannot be edited. TOKEN and SRC/SHD can be edited.
 - List fields (e.g., MACHINE): Click the right trackball button on the name of the machine (for example, JOTS4) to show a list of available choices. Select a value from the list.
 - Checkboxes (for example, AUTOSTART): Toggle ON or OFF.
3. Click OK to accept the changes. (Or click CANCEL to discard them.)
4. If the channel is turned on while editing, clicking OK automatically stops the channel and restarts it with the new settings.

EDIT AMP Window Fields**AMP Box****NAME**

Unique channel name. This field cannot be edited.

XREF

Unique three-character communications cross-reference code for the channel. This field cannot be edited.

INTERFACE

Communications interface for this channel. This field cannot be edited.

MACHINE

Name of the machine being used to transmit or receive messages on this channel.

SERVER DATA Box**HOSTNAME**

Name of the host to which the AMP circuit will connect. Only one AMP circuit may be configured per host.

CLASS

Classification level for messages transmitted over the AMP channel. Must match corresponding CLASS field on NAVMACS machine.

TOKEN

Password (1 to 14 characters) used to authenticate the host as an AMP client, and to validate the connection between the sender and the receiver.

The TOKEN field in the EDIT AMP window *must* match the corresponding TOKEN field on the NAVMACS machine.

SRC/SHD

Transmission instructions for messages that contain certain SPECAT Release Code/Special Handling Designations.

This field may contain up to six of the following characters: A, B, P, F, L, Y.

The SRC/SHD field must match the corresponding SRC/SHD field on the NAVMACS machine.

USE CDSN

Attaches a JANAP header to each message transmitted over the AMP channel.

Channel Designator and Sequence Number (CDSN) is the combination of a Channel Identification Code (CID) and a Channel Sequence Number (CSN).

Toggle the checkbox ON and the CID/CDSN window opens (Figure 6-15 -6). (The CID/CSN (CDSN) window can also be activated by clicking the CDSN button in the EDIT AMP window.)

Figure 6-15 -6 CID/CSN (CDSN) Window for AMP Edit

Enter values, as appropriate, in the following fields:

CID: A three-letter alphabetical code identifying the JANAP header, e.g., JNP.

CSN: A sequential number assigned to each message transmitted by the same channel.

OSRI: Originating Station Routing Indicator—routing indicator of the command originating the message. The value in this field must contain 4–7 letters, beginning with R.

DRI: Destination Routing Indicator—address of the command receiving the message transmission.

SSN: Station Serial Number—the number of an individual message in the sequence of all messages sent from the same OSRI (range is from 1 to 9999). The system inserts the SSN following the OSRI in Format Line 2 of each message transmitted on the channel.

AUTOSTART

Automatically turn on the channel at JMCIS startup.

SECT MSGS

A sectionalized message is a message that must be broken into smaller messages to meet certain message size restrictions.

- The process breaks the message into sections, with each section containing a maximum of five pages (20 lines per page).
- Message text pages contain only text. Therefore, if a page contains text and header information, it is not considered a message text page.

- When the SECT MSGS checkbox is clicked, the CID/CSN (CDSN) window automatically appears with default values in the fields.

6.15.3.4 EDIT API Window

For channels with an API interface the EDIT API window appears (Figure 6.15 -7).

Figure 6.15 -7 Edit API Window

How to use the EDIT API window:

1. When the window first opens, data for the selected channel appears in the fields.
2. Modify the data.
 - Data fields (for example, NAME): Cannot be edited.
 - List fields (e.g., DEVICE): Click the right trackball button on the name of the device (for example, GBIP0-ADDR05) to show a list of available choices. Select a value from the list.
 - Checkboxes (for example, AUTOSTART): Toggle ON or OFF.
 - Diamond knobs (for example, NO INPUT): Toggle ON one in each group.
3. Click OK to accept the changes. (Or click CANCEL to discard them.)

4. If the channel is turned on while editing, clicking OK automatically stops the channel and restarts it with the new settings.

EDIT API Window Fields

GPIB Channel Box

NAME

Channel name. This field cannot be edited.

INTERFACE

Communications interface for the channel. This field cannot be edited.

DEVICE

Device name (tty serial port) used for this channel.

MACHINE

Name of the machine used to transmit or receive messages on this channel.

AUTOSTART

Automatically turn on the channel at JMCIS startup.

HEADING Box

API

Use under normal circumstances.

NO INPUT

Use if the heading data seems to be erroneous. Heading data is ignored. Speed data is still considered.

SPEED Box

API 0-40 KTS, API 0-100 KTS, or API -50-50 KTS

Use speed that corresponds to the proper setting for the GPIB device.

SERIAL SPD LOG

Requires special doppler input to generate data for this field.

NO INPUT

Use if the speed data seems to be erroneous. Speed data is ignored. Heading data is still considered.

6.15.3.5 EDIT MDX Window

The MDX interface provides point-to-point data communications -- specifically, transmitting track information from one designated site to another.

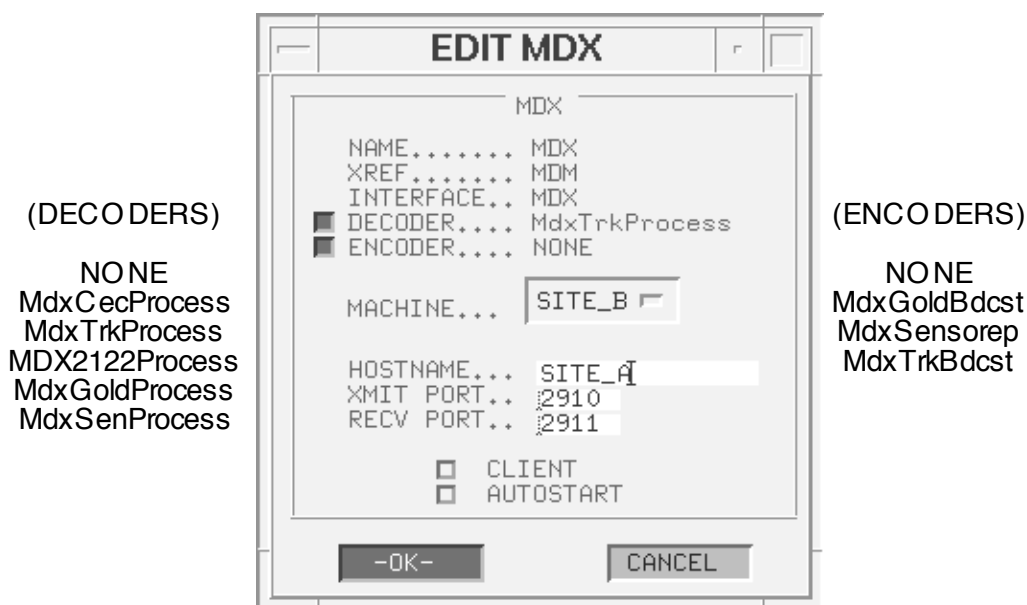
To use the MDX interface:

Before configuring and starting the MDX channel for a server/client connection, the System Administrator must complete the following:

1. Determine the version of UB running at each site.
2. Determine which site will be the server and which will be the client. *The server should have the CLIENT checkbox turned off.*
3. Determine which site is going to ENCODE and which is going to DECODE. *Either the server or the client can encode or decode data.*
4. Check the /etc/services file to ensure that the proposed transmit and receive port designations do not conflict with existing TCP port numbers.
5. Set up the route between the server and client at each site, ensuring that there is connectivity between server and client.
6. Establish the exact site host names. Each host table must contain an entry for the other site.
7. If the encoding (transmitting) site wishes to restrict what data is sent, a filter must be set before the channel is started. See "To filter an MDX Broadcast:" later in this section for details.

To use the EDIT MDX window:

When a channel with an MDX interface is selected in the Communications window (described in the Unified Build User's Guide), the EDIT MDX window appears.



6.15-8 EDIT MDX Window

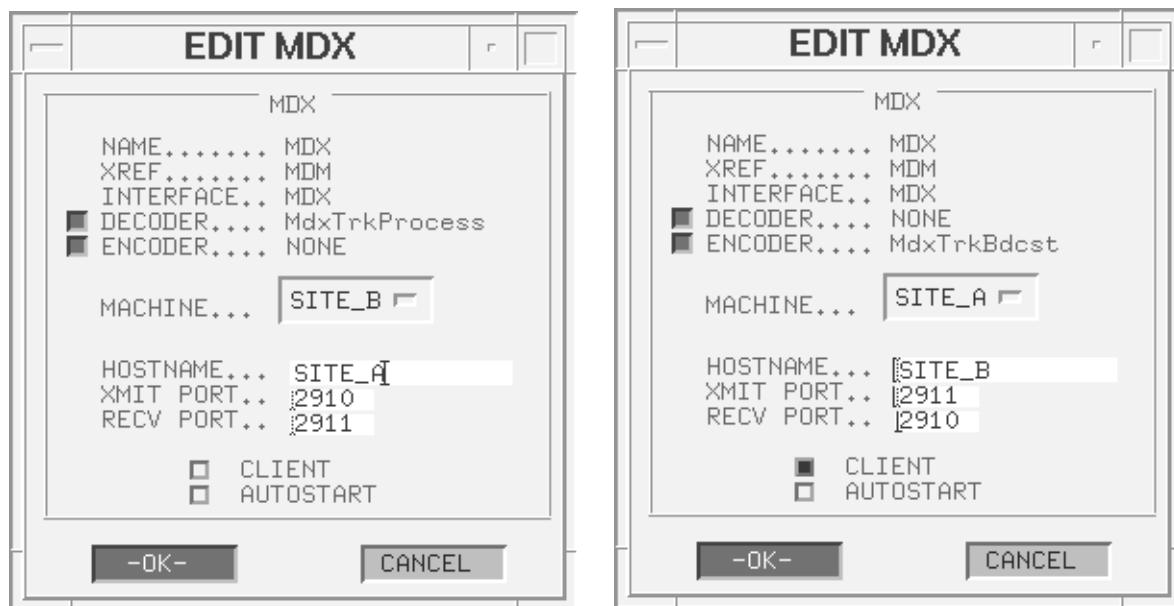
When the window first opens, data for the selected channel appears in the fields.

1. Modify the data. Note: If this workstation is the designated “server” (i.e., the ENCODER field contains a decoder name), then the DECODER field must be empty.
 - Data fields (e.g., NAME): Cannot be edited.
 - List box (e.g., DECODER): Click the list box in front of the field to view choices and select a value.
 - Or, for list fields with up/down arrows (e.g., MACHINE): Click the right trackball button on the name of the device (for example, JOTS1) to show a list of available choices. Select a value from the list.
 - Checkboxes (e.g., AUTOSTART): Toggle ON or OFF, depending whether the workstation is the master server or client machine.
2. Click OK to accept the changes or click CANCEL to discard them.

Note: If the channel is turned on while editing, clicking OK automatically stops the channel and restarts it with the new settings.

MDX Sample Configuration:

Figure 6.15-9 shows an example of a client/server configuration.



MDX Server

MDX Client

Figure 6.15-9 MDX Client/Server Configuration

About the MDX interface configuration:

- In the figure, the site designated as client will transmit data, and the site designated as server will receive data.
 - Transmitting site: Select an ENCODER, choose NONE for DECODER.
 - Receiving site: Select a DECODER, choose NONE for ENCODER.
- For ENCODER: Select MDXTrkProcess.
- For DECODER: Select MDXTRKPROCESS if receiving from same GCCS software version.
- For DECODER: Select MDX2122Process if running GCCS 2.2 and receiving GCCS 2.1 data.
- Never set a value in both ENCODER and DECODER fields, as “loop back” occurs and excessive CPU usage takes place.

The EDIT MDX window contains the following fields:

NAME

Unique channel name. This field cannot be edited.

XREF

Unique three-character communications cross-reference code for the channel. This field cannot be edited.

INTERFACE

Communications interface for the channel. This field cannot be edited.

DECODER/ENCODER

Selection of a decoder or encoder depends upon the type of data to be received by the MDX interface.

DECODER -- Valid entries include:

None

MdxCecProcess (Use if receiving CEC data)

MdxTrkProcess (Use if receiving JMCIS track data)

Mdx2122 Process (Use if receiving data only from GCCS systems)

MdxGoldProcess (Use if receiving OTH-Gold messages)

MdxSenProcess (Use if receiving SENSOREP messages)

ENCODER -- Valid entries include:

None

MdxGoldBdcst (Use if transmitting OTH-Gold messages)

MdxSensorep (Use if transmitting SENSOREP messages)

MdxTrkBdcst (Use if transmitting GCCS track data)

MACHINE

Name of the local machine being used to transmit or receive messages on this channel.

HOSTNAME

Name of the remote system.

XMIT/RCV PORT

Service numbers for the transmitting and receiving ports. Values at the sending and receiving sites must be "mirror images" of each other.

Default values for the MDX interface are 2910 and 2911.

Note: The System Administrator must check the /etc/services file to ensure that the transmit and receive port assignments do not conflict with existing TCP/IP port numbers.

CLIENT

ON - designates this machine as a client in a server/client configuration.

AUTOSTART

Automatically turn on the channel at JMCIS startup.

To filter an MDX Broadcast:

If an encoding site wishes to restrict what type of data is transmitted, a filter must be set up, or reconfigured, while the channel is not running.

1. If the channel is currently on, turn it off.
2. Select the SEARCH FILTER TABLE option from the TRACKS pull-down menu to open the SELECT SEARCH FILTER window.
3. Click ADD to open the ADD SEARCH FILTER window, or highlight the filter name and click EDIT to reconfigure the filter.
 - The name of the search filter *must* be MDX.
 - Enter data in the appropriate fields.
4. Click OK to accept the filter.
5. Start the MDX channel. MDX checks the filtering criteria.

6.15.3.6 EDIT NETWORK Window

For channels with a NETPREC, NETWORK, or TIMSOUT interface, the EDIT NETWORK window appears.

- NETWORK and TIMSOUT interfaces use a first-in-first-out queue when transmitting messages.
- NETPREC interface uses a precedence queue when transmitting messages—the system assigns the highest priority to the highest precedence message in the queue.

Figure6.15 -10 shows a TIMSOUT and NETPREC interface.

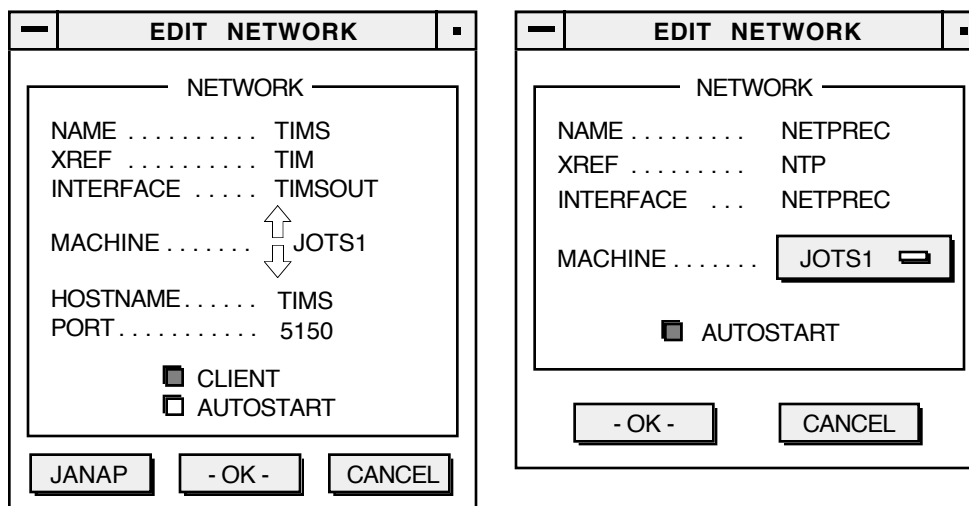


Figure6.15 -10 Edit Network Window for TIMSOUT and NETPREC Interface

How to use the EDIT NETWORK window:

1. When the window first opens, data for the selected channel appears in the fields.

2. Modify the data.
 - Data fields: NAME, XREF, and INTERFACE *cannot* be edited; HOSTNAME and PORT *can* be edited.
 - List fields (e.g., MACHINE): Click the right trackball button on the name of the machine (for example, JOTS1) to show a list of available choices. Select a value from the list.
 - Checkboxes (for example, AUTOSTART): Toggle ON or OFF.
3. Click OK to accept the changes, or click CANCEL to discard them.
4. If the channel is turned on while editing, clicking OK automatically stops the channel and restarts it with the new settings.

Note: The CLIENT checkbox and the JANAP button are no longer applicable to the TIMSOUT interface and will be removed in a later release.

EDIT NETWORK Window Fields

NETWORK Box

NAME

Unique channel name. This field cannot be edited.

XREF

Unique three-character communications cross-reference code for the channel. This field cannot be edited.

INTERFACE

Communications interface for this channel. This field cannot be edited.

MACHINE

Name of the machine being used to transmit or receive messages on this channel.

HOSTNAME

Name of the remote host. For the TIMSOUT interface, this should be TIMS.

PORT

Service number for the transmitting port. For the TIMSOUT interface, this should be 516.0.

AUTOSTART

Automatically turn on the channel at JMCIS startup.

6.15.3.7 Edit RF-NET Interface Channel

For channels with the RF-NET interface, the COMMS EDIT window appears (Figure 6.15 -11).

The screenshot shows the 'COMMS EDIT' window with the following sections:

- CHANNEL**
 - NAME RF-NET
 - XREF NET
 - INTERFACE RF-NET
 - DEVICE ☐ TTYA ☒ TTYA
 - MACHINE ☐ JOTS1 ☒ JOTS1
 - ☐ AUTOSTART
- DATA SIZE**
 - ☐ 5
 - ☐ 6
 - ☐ 7
 - ☒ 8
- PARITY**
 - ☒ NONE
 - ☐ EVEN
 - ☐ ODD
- STOP BITS**
 - ☐ 1
 - ☐ 1.5
 - ☒ 2
- RF-NET CONFIG**
 - HOLD CLOCK ... 4
 - TIMEOUT 6
 - XMIT DELAY ... 6
 - SUBSCRIBERS .. 4
 - UID
 - ☒ DECODER NONE
 - ☒ ENCODER NONE
 - ☐ IPC SOCKET
 - ☐ RS232 NORMAL
 - ☐ CONTROLLER
- BAUD RATE**
 - ☐ 50
 - ☐ 75
 - ☐ 110
 - ☐ 300
 - ☐ 1200
 - ☒ 2400
 - ☐ 4800
 - ☐ 9600
 - ☐ 19200

At the bottom are buttons for '- OK -' and 'CANCEL'.

Figure 6.15 -11 Edit RF-NET Window

How to use the RF-NET window:

1. When the window first opens, data for the selected channel appears in the fields.
2. Modify the data. However, it is **critical** that each workstation in the network have the same RF-NET CONFIG settings, with the following exceptions:
 - Only one workstation is designated as the controller.
 - The UID will be unique to that platform.
 - Data fields: NAME, XREF, and INTERFACE cannot be edited.

- List fields, MACHINE and DEVICE: Click the right trackball button on the name of the device or machine to show a list of available choices. Select a value from the list.
 - AUTOSTART: Toggle ON or OFF.
3. Click OK to accept the changes. (Or click CANCEL to discard them.)
 4. If the channel is turned on while editing, clicking OK automatically stops the channel and restarts it with the new settings.

EDIT RF-NET Window Fields

CHANNEL Box

NAME

Unique channel name. This field cannot be edited.

XREF

Unique three-character communications cross-reference code for the channel. This field cannot be edited.

INTERFACE

Communications interface for this channel. This field cannot be edited.

MACHINE

Name of the machine being used to transmit or receive messages on this channel.

RF-NET CONFIG Box

HOLD CLOCK

Amount of time (in seconds) that the RF-NET transmit clock is “held” before and after data is sent.

- Time must be the same on the controller and all subscribers, but must be less than the TIMEOUT value (a default of 4 is optimum with DVT).
- Value may be increased if some data appears not to be received.

TIMEOUT

Amount of time (in seconds) that the system should wait for data before aborting a receive session.

- Time must be the same on the controller and all subscribers.
- This value must be greater than the HOLD CLOCK value. (a default of 6 has been found to be optimum with DVT in conjunction with a HOLD CLOCK value of 4).

- If some data appears not to be received, this value may be increased in proportion to the HOLD CLOCK value.

XMIT DELAY

Amount of time in seconds that the RF-NET interface should wait before determining if the comms line is available for message transmission.

The default value is 2 (range is greater than 2, but less than 30). If a value is entered outside these parameters, a warning message appears "Illegal XMIT DELAY value. Must be between 2 and 30."

SUBSCRIBER

Maximum number of subscribers for a system (default is 4, maximum is 8). This field is used only by the controller.

UID

The unique ID for this site (must be four alphabetic characters).

Note: UIDs must be truly unique, as a system malfunction may result if two or more are the same.

DECODER

Shows which message decoder to use for incoming messages to regulate the type of data that is expected over the RF-NET.

- Options include TRKPROCESS, GOLDPROCESS, and NONE. The default is NONE, but it should be chosen for a transmitter-only configuration.
- GOLDPROCESS supports incoming Gold Broadcasts.
- TRKPROCESS capabilities are still under development and should not be used.

ENCODER

Shows message encoder to use for outgoing messages to regulate the type of data that is transmitted over the RF-NET.

- Options include TRKBDCST, GOLDBDCST, and NONE. The default is NONE, but it should be selected only if establishing a receive-only configuration.
- Select GOLDBDCST to support a Gold Message Broadcast, when activated by the user.

IPC

Inter-Process Communication model used for message processing. The default is SOCKET, since it minimizes use of RAM.

- The other IPC is SHARED MEMORY, which should be used when there is a high volume of data throughput.

RS232

The NORMAL setting is required for the Harris Modem and the INVERTED setting is required for the AN/DVT.

CONTROLLER

Indicates whether this site is a controller or a subscriber. There can be *only one* controller per network.

DATA SIZE Box

Number of bits per character for serial communications. ASCII and BINARY data types default to 8, while BAUDOT defaults to 6.

PARITY Box

Parity of the transmissions over the selected channel—NONE, EVEN, or ODD.

STOP BITS Box

Number of stop bits for transmission on the selected channel—1, 1.5, or 2.

BAUD RATE Box

Baud rate for transmissions over the selected channel.

6.15.4 COMMUNICATIONS POP-UP MENU

In addition to the options described in *Summary of Common Operations* (ADD, EDIT, EXIT, DELETE, HELP, PRINT, SELECT ALL, and UNSELECT ALL) and options that perform the same function as buttons (SET DEFAULT, GET DEFAULT, DELETE DEFAULT, and MASTER DEFAULT), the COMMUNICATIONS pop-up menu also includes the following.

6.15.4.1 START, STOP, and RESTART

Use the following pop-up options to turn the channels on and off:

Warning: Turning on and off communications channels can cause messages that are being sent and received to be lost. Be careful when using these options—do not turn channels on and off unnecessarily.

START

Turn on a channel. Select a channel with a status of OFF and click the START pop-up option to enable communications through the channel.

STOP

Turn off a channel. Select a channel with a status of ON and click the STOP pop-up option.

RESTART

Use RESTART to turn on a channel, whether its status is currently ON or OFF. If the channel is off, it is simply turned on. If the channel is on, the channel is turned off, then turned back on.

Use this option if there is a suspected problem with a communications channel that's currently turned on.

6.15.4.2 WINDOW

For most channel interface types, the WINDOW pop-up option shows the raw data from the transmissions. When a channel with a Link-11, Link-14, or V6-TTY interface is turned on, the transmission data is in the background and cannot be viewed.

1. To use the WINDOW pop-up option, the channel *must* be ON.
2. Highlight the channel and select WINDOW from the pop-up menu.
3. The type of information presented depends on the type of interface.
 - Ownship sensor interface (SINS, SRN25P, SRN25A, CVNS, SRN19, WSN5, WRN6, or LORANC)—scrolling list of input data stream.
 - Serial or network interface—scrolling lists of input and output data streams when the channel is set up for transmit and receive; otherwise, the window shows configuration settings only.
 - OTCIXS interface—OTCIXS status (V6-provided status, interface status, and messages in the V6).
 - OTCIXSTTY interface—V6-TTY status (V6-TTY statistics and raw data messages).

Ownship Sensor Interfaces:

Ownship sensor interfaces include CVNS, LORANC, SINS, SRN19, SRN25P, SRN25A, WSN5, and WRN6. Only one of these interfaces can be used at a time.

Figure 6.15-12 shows the NAV-SINS window.

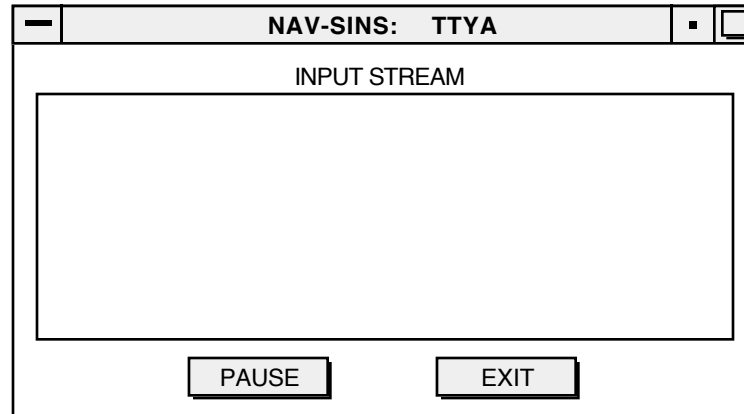


Figure6.15 -12 NAV-SINS Window

As transmissions are received through the NAV-SINS sensor, they appear in this window's scroll list box.

1. Click PAUSE to examine the transmissions.
 - a. The messages stop scrolling.
 - b. A scroll bar appears for the message box and the PAUSE button changes to CONTINUE.
 - c. Use the scroll bar to scroll back through previously displayed transmissions.
2. Click CONTINUE to show new transmissions again.
3. Click EXIT to leave the window.

Serial or Network Interfaces

Figure6.15 -13 shows the DTC interface window. Every serial and network interface has an INPUT STREAM box and an OUTPUT STREAM box that appear if the RECV and XMIT checkboxes are toggled on in the interface window.

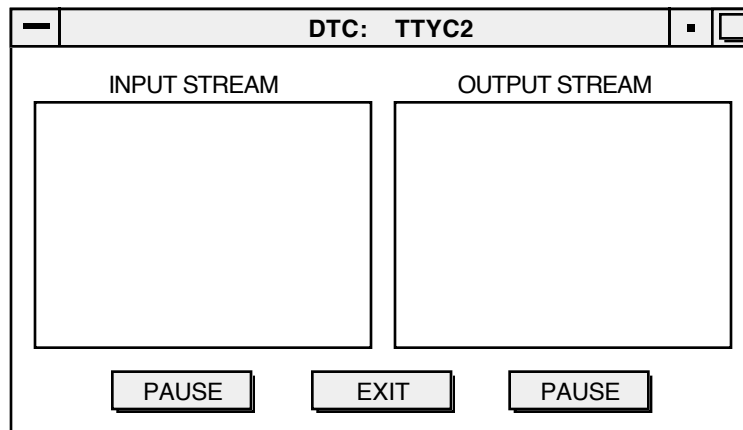


Figure6.15 -13 DTC Window

As transmissions are received and sent, they are scrolled through the boxes in these windows.

1. Click PAUSE to examine the transmissions.
 - a. The messages stop scrolling.
 - b. A scroll bar appears for the message box and the PAUSE button changes to CONTINUE.
 - c. Use the scroll bar to scroll back through previously displayed transmissions.
2. Click CONTINUE to show new transmissions again.
3. Click EXIT to leave the window.

OTCIXS Interface:

The OTCIXS channel window provides OTCIXS status information (Figure6.15-14):

OTCIXS STATUS

V6 PROVIDED STATUS

STATION ID (SID)
NET
NET STATUS
EMCON
HOLDING RCV MESSAGE
XMIT FLASH SPACE
XMIT IMMED SPACE
NET CONTROL TIME
TIME LATE

INTERFACE STATUS

| | |
|-----------------|-----------|
| INTERFACE STATE | RESETTING |
| RECEIVE STATE | IDLE |
| TRANSMIT STATE | IDLE |
| RCV TIME LATE | --:--:-- |
| TOT TIME LATE | --:--:-- |
| TIME UP | 00:03:19 |

MESSAGE IN V6

TOTAL MESSAGES 0
OLDEST MESSAGE --:--:--

| MSN | TYPE | P | SIZE |
|-----|------|---|------|
| | | | |

POP-UP MENU →

- HELP..
- V6 STATUS ONLY..
- INTERFACE ONLY..
- V6 QUEUE ONLY..
- DISPLAY ALL..
- EXIT

DELETE VIEW

Figure 6-15 -14 OTCIXS Status Window with Pop-up Menu

If the OTCIXS interface to the V6 is not connecting properly:

- All fields in the V6 PROVIDED STATUS box will be blank.
- The INTERFACE STATE field in the INTERFACE STATUS box will show "RESETTING," or "DOWN" depending on when this window is opened and channel activation, i.e., starting or stopping.

To use the window:

1. To view specific status information, select an appropriate option from the pop-up menu:
 - V6 STATUS ONLY—view V6 PROVIDED STATUS box only.

- INTERFACE ONLY—view INTERFACE STATUS box only.
 - V6 QUEUE ONLY—view MESSAGE IN V6 box only.
 - DISPLAY ALL—view the entire OTCIXS STATUS window.
2. VIEW and DELETE messages in the V6 queue, if appropriate.
 3. Select EXIT from the pop-up menu to close the window.

V6 PROVIDED STATUS Box

Shows an image of the V6 status message provided by the V6 on demand. Updates for the V6 status message occur every three seconds, or status is automatically updated if there is a change in any of the fields in this box.

STATION ID (SID)

SID number that the V6 uses to access the OTCIXS net. The SID is set at the V6 by the operator responsible for establishing OTH-T communications.

NET

Operational mode for the V6. The modes are either OTCIXS or SSIXS (submarine communications).

NET STATUS

Transmitting state of the V6. Consult the V6 manual for a description of the various net types.

EMCON

EMCON (Emissions Control) state of the V6. If the EMCON state is ON, transmissions cannot be sent from the V6.

HOLDING RCV MESSAGE

YES—the V6 is currently holding a message. (The RECEIVE STATE field in the INTERFACE STATUS box should read REQUESTING.)

NO—no message is being held.

XMIT FLASH SPACE

Available space (in bytes) for FLASH priority messages to be transmitted. No FLASH message is sent to the V6 until there is enough space to accommodate it.

XMIT IMMED SPACE

Available space (in bytes) for IMMED priority messages to be transmitted. No IMMED message is sent to the V6 until there is enough space to accommodate it.

NET CONTROL TIME

Current time set within the V6.

TIME LATE

Number of seconds since JMCIS last received a status message from the V6. If this field shows a number greater than three seconds, there is a problem with the V6 connection.

Typically, if this field shows a number greater than 3, the INTERFACE STATE field in the INTERFACE STATUS box reads RESETTING. This indicates that a problem has occurred and the V6 interface is being reinitialized.

If this field shows a number greater than 30, the INTERFACE STATE field will read DOWN to indicate the connection between JMCIS and the V6 is no longer working.

INTERFACE STATUS Box

Contains a summary of the JMCIS interface status to the V6/GFCP. (GFCP is the Generic Front-end Communications Processor, which can be set up as a bridge between the V6 and JMCIS.) If there is no GFCP, this shows the status of the direct connection between JMCIS and V6.

INTERFACE STATE

Status of the interface between JMCIS and the V6. The following status messages may appear in this field:

OK—system is successfully exchanging information with the V6.

RESETTING—system has encountered some problem interfacing with the V6 and is reinitializing the interface.

DOWN—system is not able to exchange information with the V6. Messages pending transmission when the interface is down are marked V6 DOWN in the TOT column of the Outgoing Message Log.

These messages (the DOWN ones) are not automatically transmitted after the interface is reestablished, but may be manually transmitted with the OUTGOING MSG LOG option on the COMMS pull-down menu.

RECEIVE STATE

IDLE—UB assumes the V6 is not holding a message and is not currently receiving a message from the V6.

RECEIVING—UB has detected a holding condition and has received at least the start of a message.

TRANSMIT STATE

Status of transmissions going from JMCIS to the V6. Note: If no V6 SID is entered for Ownship, JMCIS will not transmit messages to the V6. The following status messages may appear in this field:

IDLE—no messages to transmit.

WAITING—a message to transmit, but there is either:

- No V6 SID entered for Ownship.
- Insufficient V6 space available for the transmission.
- At least 50 messages waiting and the V6 is full.

RQSTXMT—a request to the V6 to transmit a message. Because of transmission speed, this message appears in this field for about half a second.

XMITDATA—sending message lines to the V6.

XMITEND—sending the last line of the message to the V6. Because of the speed of transmissions, this message appears in this field for about half a second.

RCV TIME LATE

Amount of time since JMCIS last received a message from the V6.

TOT TIME LATE

Time of Transmission timelate value—the amount of time elapsed since the V6 last transmitted a message to a satellite.

TIME UP

Amount of time elapsed since OTCIXS or SSIXS was started.

MESSAGE IN V6 Box

Transmissions from JMCIS to the V6 are stored for a period of time before they are sent to a satellite.

- When they are sent, either all or a large portion of the stored messages are transmitted as a group.
- While stored in the V6, these messages can be viewed and deleted from the MESSAGE IN V6 box.

TOTAL MESSAGES

Total number of JMCIS messages currently stored in the V6.

The V6 queue can hold a maximum of 50 messages. (Normally, the V6 queue contains far fewer than 50 messages.) When the V6 queue reaches 50 messages, an alert appears in the alert line in the top-left part of the screen:

“V6 QUEUE IS FULL”

This alert frequently indicates that a hardware problem is causing the V6 queue to fill up. Check the V6 equipment, the GFCP, and all connections to make sure everything is hooked up correctly.

OLDEST MESSAGE

Timelate value for the oldest message currently stored in the V6. For example, if the oldest JMCIS message in the V6 has been there for six minutes, 00:06:00 is shown in this field.

MSN

V6 message sequence number—a number assigned to the message by the V6.

TYPE

Message type. The following message types may appear in this column:

ACK—an acknowledgment message. Generated whenever JMCIS receives a message with a SID on the address list.

MISNDATA—a Mission Data type message.

G-DATA—generated by JMCIS as a result of a broadcast or user transmission.

G-OPNOTE—an opnote or other special type of message. Special types of messages include PIM tracks, screen kilos, four whiskey messages, and a few others.

P

The Message Precedence code. The following codes are available:

| | | |
|---|---|-----------------------|
| Z | = | Flash |
| O | = | Operational Immediate |
| W | = | Critical * |
| P | = | Priority |
| R | = | Routine |

Z, O, and W are higher priority messages, while P and R messages are of a lower priority.

* Note: CRITIC messages are TACINTEL messages that are received only over a SERIAL channel that specifies the TACINTEL delimiter file in the COMMS EDIT window. However, CRITIC messages are not limited to the SERIAL channel for retransmitting or forwarding purposes.

SIZE

Number of characters for the message. This is important if deleting a large message from the V6 to make room for a message of higher importance.

DELETE Button

Select one or more messages from the scroll list.

Click DELETE. The messages are removed.

VIEW Button

Select a message from the list.

Click VIEW to open the MESSAGE IN V6 window.

Use the PGUP, PGDN, HOME, and END buttons to view the information.

Click EXIT to close the window.

OTCIXTTY Interface:

When the OTCIXTTY interface communications channel is turned on, it shows a chart of V6-TTY Message Statistics, V6-TTY SID Statistics, and V6-TTY Raw Data.

1. Select the OTCIXTTY interface from the COMMUNICATIONS window list.
2. Choose the WINDOW pop-up option to open the OTCIXS-TTY STATISTICS window (Figure 6.15 -15).
3. To work properly, the V6 must be set to receive data in ASCII format (not BAUDOT). The V6 has a port that connects to a teletype; if this port is connected to a UB machine instead, it keeps track of what the V6 is doing.

OTCIXS-TTY STATISTICS

RAW DATA

OTCIXS V6TTY STATS

19:00 TOTAL

| | | |
|--------------------|-------|-------|
| NO NET CONTROL | 00000 | 00000 |
| NUMBER DUPES . . | 00000 | 00000 |
| INHIBITS | 00000 | 00000 |
| INTERFACE DOWN | 00000 | 00000 |

19:00 STATS

| SID | #MSGs | #GMSGs |
|-------------------|-------|--------|
| ** NO SID DATA ** | | |

TOTALS: 00000 00000

TOTAL STATS

| SID | #MSGs | #GMSGs |
|-------------------|-------|--------|
| ** NO SID DATA ** | | |

TOTALS: 00000 00000

ENTER SID

| HOUR | #MSGs | #GMSGs |
|-------------------|-------|--------|
| ** NO SID DATA ** | | |

TOTALS: 00000 00000

POP-UP MENU

- HELP..
- PAUSE
- OTCIXS/TADIXS
- SID STATS
- HOUR STATS
- TOTAL STATS
- DAY AGO STATS
- 2 DAY AGO STATS
- EXIT

☒ AUDIBLE NET ALERT ☒ STATS TO SCREEN ☐ STATS TO PRINTER

PAUSE **EXIT** **SHOW TADIXS**

Figure 6-15 -15 OTCIXS-TTY Statistics Window with Pop-up Menu

The OTCIXS-TTY STATISTICS window contains two main boxes of data—RAW DATA and V6TTY STATS. Scrolling bars in each box display the information.

RAW DATA Box

Contains raw messages that are normally sent to the teletype. This box can be toggled to show either a *dynamic stream* or a *static, reviewable/scrollable list* of V6-TTY raw data. Toggling between the two modes does not affect the collection of V6 statistics.

PAUSE (Streaming data mode): Dynamically updates the display as new messages are received from the V6-TTY.

- Messages are shown in the order they were received; oldest messages appear at the top of the screen, newest ones at the bottom.
- An audible beep sounds whenever certain messages (INHIBIT, INTERFACE UP, INTERFACE DOWN, NET CONTROL, and NO NET CONTROL) are received.
- The messages that generate a beep are shown in a different color.

CONTINUE (Review data mode): Provides a scroll bar to review the last 500 messages received.

- Review data mode does not update dynamically as new messages are received.
- New messages are stored and are shown when the user returns to the streaming data mode.
- The statistics are dynamically updated in both streaming and review data modes.

V6TTY STATS Box

Contains the statistics accumulated while the V6-TTY channel is turned on.

- If set to receive OTCIXS network statistics, the label over this box displays OTCIXS V6TTY STATS.
- If set to receive TADIXS network statistics, the label displays TADIXS V6TTY STATS.

The SHOW OTCIXS/SHOW TADIXS button switches the V6TTY STATS box between OTCIXS and TADIXS network statistics:

- SHOW OTCIXS button displayed = in TADIXS mode.
- SHOW TADIXS button displayed = in OTCIXS mode.

Choosing one or the other does not affect how the V6-TTY window collects statistics.

The OTCIXS V6TTY STATS column shows statistics collected for the current day (beginning at 0000 GMT). The following information is displayed:

NO NET CONTROL

Number of times net control has been lost on the OTCIXS network.

NUMBER OF DUPES

Number of duplicate copies received for incoming messages.

INHIBITS

Number of times the TDP (Tactical Data Processor) failed to receive messages, or the number of times the OTCIXS network failed to accept messages for transmission.

INTERFACE DOWN

Number of times the V6 interfaces were not operational.

Scroll List Under the Network Status Information:

Shows SID statistics for the current hour. For each SID, the following fields are displayed:

#MSGs

Number of messages sent by this SID in the past hour.

#GMSGs

Number of gateway messages sent by this SID in the past hour.

TOTALS: The total number of messages received in the hour.

Scroll List Under the Current Hour SID Box

Shows SID statistics for the current day (from 0000 GMT to present). For each SID, the following fields are displayed:

#MSGs

Number of messages sent by this SID for the current day.

#GMSGs

Number of gateway messages sent by this SID for the current day.

TOTALS: The total number of messages sent for the current day.

Scroll List in the OTCIXS V6TTY Stats Box

Shows hour-by-hour statistics for any SID. To use this box:

1. Enter a SID in the ENTER SID field.
2. Press RETURN.
3. Statistics for the SID appear in the scroll list under the ENTER SID field.

The following fields of information are displayed in the scroll list:

HOUR

Hours 0000 through 2359. Hours not yet passed are listed in dark blue.

#MSGs

Number of messages sent by this SID during the hour.

#GMSGs

Number of gateway messages sent by this SID during the hour.

TOTALS: The total number of messages sent for the current day.

OTCIXS-TTY STATISTICS Window Checkboxes**AUDIBLE NET ALERT**

Enable/disable the bell that sounds when certain messages are received by the V6-TTY window.

Beeps are generated for messages that contain INHIBIT, INTERFACE UP, INTERFACE DOWN, NET CONTROL, and NO NET CONTROL.

STATS TO SCREEN

Enable/disable the sending of statistics to the RAW DATA box.

If this checkbox is clicked on, statistics will be sent to the RAW DATA box when the SID STATS, HOUR STATS, TOTAL STATS, DAY AGO STATS, or 2 DAY AGO STATS pop-up option is used.

STATS TO PRINTER

Enable/disable the sending of statistics to the printer.

If this checkbox is clicked on, statistics will be sent to the printer when the SID STATS, HOUR STATS, TOTAL STATS, DAY AGO STATS, or 2 DAY AGO STATS pop-up option is used.

OTCIXS-TTY Statistics Window Pop-Up Menu

In addition to the options described in *Summary of Common Operations* (EXIT), the OTCIXS-TTY STATISTICS pop-up menu also includes:

PAUSE

Performs the same as clicking the PAUSE/CONTINUE button.

OTCIXS/TADIXS

Performs the same as clicking the SHOW TADIXS/SHOW OTCIXS button.

SID STATS

Print the hour-by-hour statistics for any SID either to the RAW DATA box (STATS TO SCREEN checkbox), or to the printer (STATS TO PRINTER checkbox).

To use this menu option:

1. Enter a SID in the ENTER SID field above the last scroll list in the OTCIXS V6TTY STATS box.
2. Ensure the appropriate net is selected (OTCIXS or TADIXS).
3. Choose the applicable SID STATS option and the statistics are sent.

HOURLY STATS

Print the current hour statistics either to the RAW DATA box (STATS TO SCREEN), or to the printer (STATS TO PRINTER). Ensure the appropriate net is selected (OTCIXS or TADIXS).

TOTAL STATS

Print the current day statistics either to the RAW DATA box (STATS TO SCREEN), or to the printer (STATS TO PRINTER). Ensure the appropriate net is selected (OTCIXS or TADIXS).

DAY AGO STATS

Print the statistics from the previous day either to the RAW DATA box (STATS TO SCREEN), or to the printer (STATS TO PRINTER). Ensure the appropriate net is selected (OTCIXS or TADIXS).

2 DAY AGO STATS

Print the statistics from two days ago either to the RAW DATA box (STATS TO SCREEN), or to the printer (STATS TO PRINTER). Ensure the appropriate net is selected (OTCIXS or TADIXS).

6.15.4.3 SET DEFAULTS and MASTER DEFAULT POP-UP OPTIONS

Use the DEFAULTS and MASTER DEFAULT pop-up options to manage channel settings.

Click DEFAULTS to open the DEFAULTS window (Figure 6.15-16).

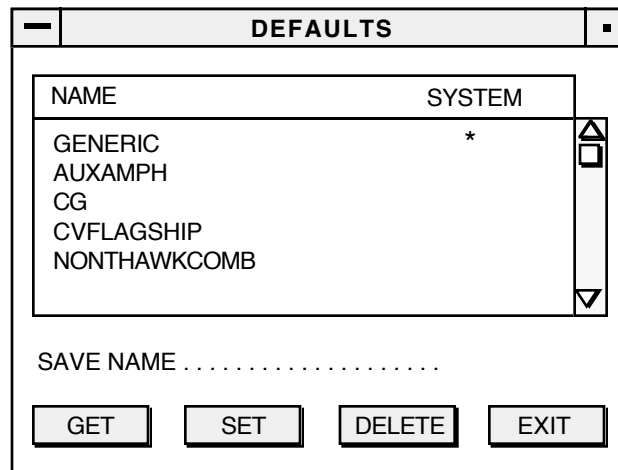


Figure 6.15-16 Defaults (Communication Channel) Window

DEFAULTS

Choose from a list of preset, non-editable channel configuration files, or user-defined, editable configuration files.

NAME

Configuration file name. System files have a *.sys* extension; user-created files end in *.usr*

SYSTEM

An asterisk (*) appears in this column to indicate a system file.

SAVE NAME

Save a new file. Text case is very important when adding a file to the database.

Note: Enter the name in all uppercase characters. If an invalid case is entered, a warning appears and the following actions occur:

All lowercase characters—system will accept name, but *will not* save file.

Mixed case—system will not accept name and will not save file.

DEFAULTS Window Buttons

GET—a file from the scroll list using one of the following methods:

- Select the item and click GET.
- Double-click on the item name.

If there are too many files in the directory, the system issues the following warning: "TABLE IS FULL. PLEASE REPLACE A CURRENT ENTRY OR DELETE SOME ENTRIES."

SET—a new channel configuration file. Type a unique name in the SAVE NAME field and click SET. The following additional actions are applicable:

- To overwrite a user file in the window, select the file and type a new name. At the warning window "Overwrite Existing File?" click SET again, or CANCEL to enter a new file name.
- A system file cannot be overwritten. A warning will appear "System Files Cannot Be Overwritten. Use Another Filename."

DELETE—files from the scroll list.

1. Select the file or multiple files from the scroll list.
2. Click DELETE.
3. A system file (i.e., any file with a .sys extension or an *) cannot be deleted.
4. Click OK from the confirmation window to complete the delete.

MASTER DEFAULT

Reset all communications channels to the original settings assigned at the time of system installation.

- Each of the channel settings are reset to the exact settings given at system install, including all fields, diamond knobs, and checkboxes found in the COMMS EDIT window.
- The OFF/ON status is reset.
- Any channels added after system install are deleted.
- Any changes made to the communications channels are removed and will have to be added again after using this option.

6.15.4.4 PRINT POP-UP OPTION—COMMUNICATIONS WINDOW

Use the PRINT pop-up option to generate a printed report for all the communications interfaces in the system. The following fields are listed on the printed report:

NAME

Communications interface.

INTERFACE

Interface type (examples: OTCIXS, SERIAL, SINS, etc.).

MACHINE

Assigned name for the workstation being used for communications with this interface.

PORT

Workstation port used for communications for this interface.

BAUD

BAUD rate used for communications on this interface.

PARAMS

Data size, followed by the parity, followed by the stop bits for the interface. The data size (a number from 5 to 8) is displayed first, followed by a dash, then the parity (N = None, E = Even, O = Odd), then another dash, then the stop bits (1, 1.5, or 2).

DATA

Code for the data type used for the interface. Data type codes are:

| Code | Data Type |
|------|-----------|
| ASC | ASCII |
| BAU | BAUDOT |
| BIN | BINARY |

XON/XOFF

Shows whether the XON function is turned ON or OFF, followed by a slash, then whether the XOFF function is turned ON or OFF.

R/X

Shows whether transmissions can be received on this interface (Y=Yes, N = No), followed by a slash, then whether transmissions can be sent on this interface (Y = Yes, N = No).

A/SRC

Shows whether this interface is set to AUTOSTART (Y = Yes, N = No), followed by a slash, then a code for the Source for the interface.

If the Source is Intel, two dots are displayed.

If the interface has a Link source, this will display as L1, L2, L3, or L4. Similar abbreviations are used for other Sources.

6.16 CHANNEL STATUS

Use the CHANNEL STATUS option to view the status of all active communications channels.

To access this window: COMMS pull-down menu : CHANNEL STATUS option : CHANNEL STATUS window (Figure6.16-1).

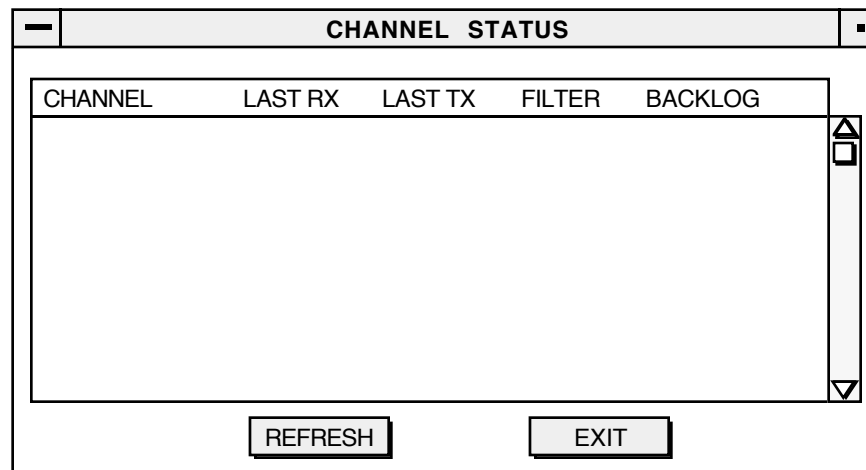


Figure6.16 -1 Channel Status Window

Note: For Link channels, only the channel name is displayed. All relevant information for other active channels is listed in the following window fields:

CHANNEL

Active communications channel name.

LAST RX

Time that the most recently received message on this channel entered the system.

LAST TX

Time that the most recently transmitted message on this channel was sent out.

FILTER

Any filters set for the channel.

BACKLOG

If messages have been received in the ILOG from this channel that have not yet been processed, shows the current number of these backlogged messages.

REFRESH—updates the list to include information that has changed since you selected this option.

EXIT— leave the CHANNEL STATUS option.

6.17 NAV UPDATE RATE

The NAV UPDATE RATE option is used to set a time interval to update and archive the position of Ownship on the tactical display.

Ownship interfaces continuously monitor Ownship's position and report that position to UB. The NAV UPDATE RATE option allows you to ignore these updates for a specified time, then replot Ownship after the period elapses.

To access this window: COMMS pull-down menu : NAV UPDATE RATE option : NAV UPDATE RATE window (Figure6.17 -1).

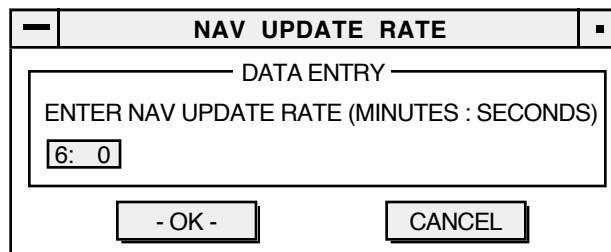
A screenshot of the 'NAV UPDATE RATE' window. The window has a title bar with a minus sign, the text 'NAV UPDATE RATE', and a maximize button. Inside the window, there is a section labeled 'DATA ENTRY' with a line above it. Below this, the text 'ENTER NAV UPDATE RATE (MINUTES : SECONDS)' is displayed. A text input field contains the value '6: 0'. At the bottom of the window, there are two buttons: '- OK -' and 'CANCEL'.

Figure6.17 -1 Nav Update Rate Window

How to use the NAV UPDATE RATE Window:

1. The single edit field shows the current update interval. To change this time, enter a new time (in minutes and seconds).
2. When a new position for Ownship is reported to UB, a check is made to see whether this interval has passed.
 - If not, the new position information is ignored and will continue to be ignored until the time interval has passed.
 - If the interval has passed, the next position report for Ownship is accepted and Ownship's position is updated on the tactical display.
3. When the value appears in the edit field, click OK to accept it or click CANCEL to discard it.
4. If the update interval is changed, restart the active Ownship interface (from the COMMUNICATIONS option) for the new time to take effect.

Notes

Notes